

The JUNIATA RIVER WATERSHED

“Watershed... A watershed is the entire land area from which all the water, both above and below ground, flows into a specific stream, river, lake or bay.”

The Juniata watershed is made up of 3,400 square miles that encompass 12 counties in south central Pennsylvania. All or part of Bedford, Blair, Cambria Centre, Franklin, Fulton, Huntingdon, Juniata, Mifflin, Perry, Snyder, and Somerset Counties make up the Juniata watershed.

The watershed is bordered to the north by the West Branch of the Susquehanna River, to the east by the Susquehanna River, to the south by the Potomac River, and to the west by the Ohio River. The western boundary is the Allegheny Front, which separates rivers that flow eastward toward the Susquehanna River and Chesapeake Bay from those that flow westward toward the Ohio River and eventually the Mississippi.

THE JUNIATA RIVER

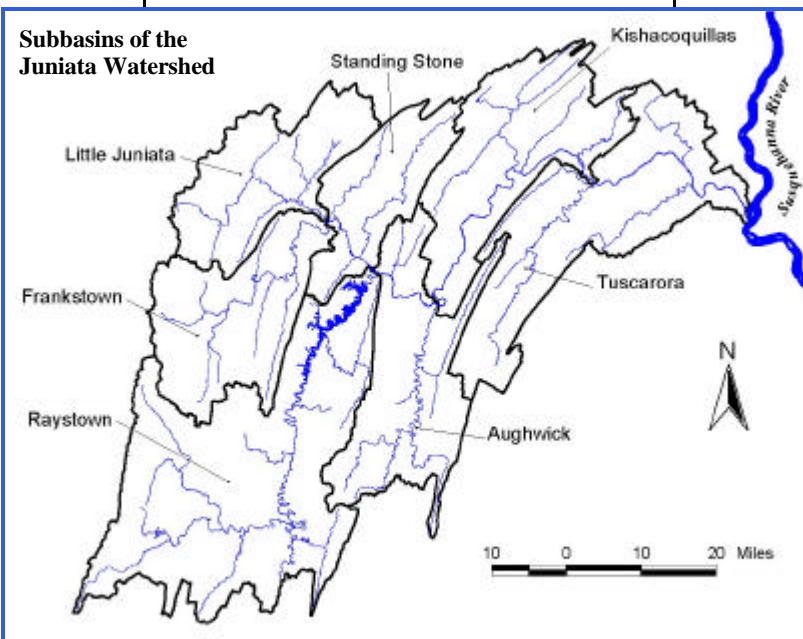
The Juniata River is approximately 100 miles long and is the second largest tributary to the Susquehanna River. The main stem of the Juniata enters the Susquehanna River near Duncannon, in Perry County.

The main stem of the Juniata River is formed by three major tributaries: the Raystown Branch, the Frankstown Branch, and the Little Juniata River. These three streams originate on the eastern slope of the Allegheny Front.

The Raystown Branch, the largest tributary of the Juniata River, is 124 miles long and drains rough mountainous country. The Frankstown branch is 45 miles long and the Little Juniata is 32 miles long.

Other major tributaries of the Juniata include Standing Stone Creek, Aughwick Creek, Kishacoquillas Creek, and Tuscarora Creek. The seven subbasins of the Juniata watershed are named for these seven major tributaries.

In total, more than 400 named streams flow into the Juniata River. When the lengths of all the major and minor tributaries are added together, they equal a total of 6560 stream miles!



HISTORY

The name “Juniata” comes from an American Indian word meaning standing stone and is thought to be a reference to a projecting rock the Juniata tribe paid reverence to. This standing stone was located at the mouth of Standing Stone Creek in Huntingdon.

The Juniata River watershed is a predominantly rural region. The area is especially notable for its history as a major transportation corridor across the Commonwealth. The Pennsylvania Main Line Canal and the Pennsylvania Railroad, both built in the early to mid-1800s, traveled along the Juniata River from the

Susquehanna River to the Allegheny Ridge, providing a key link between Philadelphia and Pittsburgh. Iron production flourished in the 1800s, and the modern transportation systems helped this area grow rapidly. Iron production began to decline in the 1870s, while coal mining, limestone quarrying, and sand quarrying increased. The production of silica bricks became the dominant industry into the early 1900s. Since the early 1900s, through the present day, the Juniata River region has alternated between periods of prosperity and depression.

WHAT'S SO SPECIAL ABOUT THE JUNIATA WATERSHED?

The relative shallowness and gentle course of most of the Juniata River along the base of steep, scenic slopes make it valuable for quiet, recreational pursuits such as canoeing and fishing. The river is noted for its plentiful smallmouth bass, walleye, muskie, and others. Many of the Juniata's tributaries are noted as high quality cold water fisheries that support trout populations.

A variety of plant species grow in and along the Juniata River, including water willow, lizard-tail, and numerous species of pond weeds. The beautiful Jeweled-shooting-star, now classified as a threatened species, can be seen on the moist limestone cliffs along the Juniata.

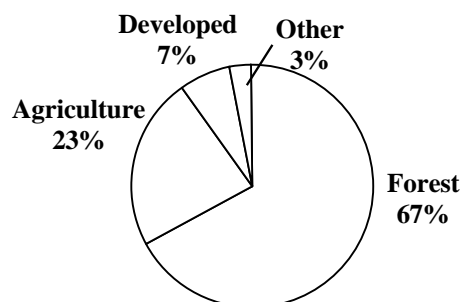
The abundance of forestland interspersed with plentiful farmland and water sources creates a diversity of habitat types that favors many species of wildlife. White-tailed deer and wild turkey are the most significant game species in the region, but others

THE BASIN

The Juniata River basin lies in the ridge and valley region of the Appalachian Mountains. Most of the rock found in the basin is sandstone, shale, and limestone. Bituminous coal is abundant in the Broad Top Region and along the Allegheny Front. Other mineral resources have been extracted throughout the watershed including sand, manganese, clay, limestone, zinc, lead, iron, aluminum, and copper.

The ridges and valleys of the Juniata watershed are generally oriented in a north-east to southwest direction. The highest ridges of the Juniata River basin range upward of 3,000 feet above sea level with the highest point being Blue Knob at 3,146 feet above sea level. The lowest point is at the confluence of the Juniata and Susquehanna Rivers at 340 feet above sea level.

Most of the forestland in the Juniata watershed exists on or near the mountain ridges. The forests are composed primarily of oak, hickory, maple, beech, birch, elm, ash, aspen, and pine.



Juniata Watershed Land Use

include black bear, gray squirrel, Eastern cottontail rabbit, and woodchuck. According to the PA Game Commission, fur-bearing species that can be trapped or hunted in the watershed include beaver, muskrat, red fox, gray fox, raccoon, opossum, skunk, various species of weasel, and coyote. Fifty species of mammals live in the watershed, including bobcat, porcupine, bats, mice, rats, voles and shrews.

One hundred seventy-two species of birds live and breed in the watershed, including songbirds, waterfowl, and raptors. Sixty-three species of fish have been identified in the watershed, including sunfish, bass, perch, catfish and trout. In addition to fish, aquatic macroinvertebrates make up an important part of the ecosystem in the watershed. Without these populations, overall health of the river would decrease. Approximately 119 different families of macros live in the watershed, including mayfly, caddisfly, stonefly, dobsonfly, and damselfly larva, as well as water beetles, crayfish, and worms.

RESTORING WILDLIFE ALONG THE JUNIATA

American shad are a migratory fish that were once numerous in the Juniata River. The shad traveled from the Juniata to the Chesapeake Bay as juveniles then returned several years later to spawn. In the early 1900's, four large hydroelectric dams were built on the lower Susquehanna River, blocking the shad's passage. A "trap and transport" program was instituted in 1972 to restore shad in areas they could no longer swim to. Meanwhile, fish lifts have been built at the three lower dams, and a fish ladder was opened at York Haven in the spring of 2000. These lifts have worked well enough that the "trap and transport program" has been discontinued. The Van Dyke shad hatchery along the Juniata River in Thompsontown bolsters these efforts by maintaining viable populations of shad in the lower Juniata and Susquehanna Rivers.

WORKING TO PROTECT THE JUNIATA WATERSHED

Though the Juniata watershed is composed of a picturesque river, as well as beautiful mountains and valleys, some pressing concerns do face this watershed. In 2000, the Department of Environmental Protection (DEP) listed streams and rivers impaired or threatened by pollution. Some of the causes of impairment for tributaries of the Juniata are acid mine drainage, urban runoff, combined sewer overflow, industrial

and municipal point source pollution, and agriculture. Some of the most important issues to residents of the watershed include poor land use planning, stormwater runoff and flooding, illegal roadside dumping, malfunctioning septic systems, streambank erosion, wetland deterioration, excessive nutrients in streams, and lack of conservation education.

The Juniata Clean Water Partnership, or JCWP, was formed in 1997 to begin addressing the environmental and natural resource issues affecting the Juniata River watershed. The JCWP is a regional coalition of citizens, community groups, non-profit conservation organizations, county planning offices, and county conservation districts working to enhance, protect, and restore the resources of the Juniata watershed.

In the fall of 2000, the JCWP completed the Juniata Watershed Management Plan. The Plan was written to help guide conservation efforts in communities throughout the watershed. Projects have been identified that will alleviate common water-related concerns in the region. Township supervisors, borough councilors, watershed associations, and community groups can use the Plan as a starting point and catalyst to carry out restoration and protection projects. The primary task of the JCWP is to assist in implementing the projects recommended in the Plan. These efforts are crucial to improving water quality and quantity, and providing for a clean and healthy future.

The Department of Conservation and Natural Resources (DCNR) placed the Juniata River, the river basin, and all of its tributaries on the Rivers Conservation Registry in February, 2000. The Registry honors PA rivers and watersheds that have completed conservation plans.

FROM THE MOUNTAINS . . . TO THE BAY

Because the Juniata River flows into the Susquehanna, and the Susquehanna into the Chesapeake Bay, the Juniata River watershed is also part of the larger Chesapeake Bay watershed that encompasses 64,000 square miles in six states (New York, Pennsylvania, Maryland, Delaware, West Virginia, and Virginia). This means that some of the pollutants that enter the Juniata River could end up in the Bay. By reducing pollution here in the Juniata watershed, you are not only helping the Juniata, but also the Chesapeake Bay, the largest and most productive estuary in the United States. The Bay is home to more than 3,600 species of

plants and animals including an incredible variety of fish, crabs, oysters, the bald eagle, diamondback terrapin, and the bottlenose dolphin. Since 1983, the Chesapeake Bay Program partners (Maryland, Pennsylvania, Virginia, the District of Columbia, the U.S. Environmental Protection Agency and the Chesapeake Bay Commission) have been working together to restore the Bay's living resources.

YOU CAN HELP!

- Get involved! Join a watershed association, or start one in your area if none exists.
- Volunteer to monitor a local stream.
- Make your voice heard! Support land use plans in your borough or township that allow for "smart" growth and protect ground and surface water.
- Plant ground cover, shrubs, and trees in your yard to reduce runoff into storm drains and streams.
- Report any illegal dumping that you see to the appropriate authorities.
- If your home has a septic system, make sure it is routinely cleaned.
- Properly dispose of household hazardous wastes like paint and cleaners—don't dump them down your drain or in the backyard or into storm drains.
- If you are a farmer, work with your local conservation district to set up Best Management Practices for water pollution prevention.

FOR MORE INFORMATION:

Juniata Clean Water Partnership
RD #1 Box 7E
Huntingdon, PA 16652
(814) 627-5391 or (814) 627-5082
www.jcwp.org

Conservation Districts:

Bedford County – (814) 623-7900
Blair County – (814) 696-0877
Fulton County – (717) 485-3547
Huntingdon County – (814) 627-1627
Juniata County – (717) 436-6919
Mifflin County – (717) 248-4695
Perry County – (717) 582-8988

This watershed profile has been produced by the **Juniata Clean Water Partnership** in Huntingdon, PA and the **National Institute for Environmental Renewal** in Mayfield, PA, and is made possible through a cooperative agreement with the U.S. EPA Chesapeake Bay Program. Produced 03/01