



Ohio River Watershed

I. Location

- Illinois, Indiana, Kentucky, Ohio, West Virginia, and Pennsylvania
- The Ohio River begins at the convergence of the Allegheny River and Monongahela Rivers near Pittsburgh, PA.
- The Ohio River drains into the Mississippi River and flows to the Gulf of Mexico.

II. Main Waterways in Pennsylvania

- Ohio River: Total length= 931 miles
Average depth= 24 ft
- Monongahela River: Total length= 128 miles
- Allegheny River: Total length= 325 miles
- French Creek: Total length= 117 miles
- Youghiogheny River: Total length in PA= 80 miles
- Pymatuning Reservoir: 17,000 acre manmade reservoir
- Other important waterways: Conneaut Lake, Clairon River, Redbank Creek, Conemaugh River, Kiskimineta River, Casselman River, Raccoon Creek, Slippery Rock Creek, and Beaver River

III. History

- Territorial claims over the Ohio River Basin sparked the French and Indian War in the 1700's.
- First federally supported lock/dam system was built on Davis Island along the Ohio River in 1885.

IV. Watershed Area and Size

- Total Watershed Area= 154,185 square miles, including 15,164 in PA

V. Surrounding Environment

1. Land Use and Land Cover

- Main cities: Pittsburgh, Beaver, Butler, Sharon, Washington, New Castle, Meadville, Oil City
- Smaller cities with mainly residential and somewhat industrial areas
- Land is mainly developed consisting of industrial, residential, and pasture/crop land areas
- Northern area of watershed also contains deciduous, evergreen and mixed forest land



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(V. Surrounding Environment cont.)

- Agricultural areas
- Recreation facilities and designated areas
- Upper area contains a portion of the Allegheny National Forest
- Mixed forest life, including: maple, birch, oak and beech trees. These tree types can be found in the Appalachian Oak Forest, Mixed Mesophytic Forest, Beech/Maple Forest and Northern Hardwood Forests located in Pennsylvania.
- Home to over 140 species of fish
- Habitat for endangered species: bald-eagle, osprey, weasel, green salamander, bowfin fish
- Allegheny National Forest
- State park land in PA including: Point State Park, Allegheny Islands State Park, Moraine State Park, Keystone State Park, Laurel Mountain State Park, Shawnee State Park, Elk State Park, Pymatuning State Park
- Mining, manufacturing, oil/gas production, construction companies, transportation
- 20 dams
- 49 power generating facilities account for 6% of US generating capacity
- The Ohio River Basin is considered the home to America's industries.

VI. Population

- 3,500,00 people live in the Ohio River Watershed in PA
- 25,000,000 people live in the Ohio River Watershed total
- 10% of the US population lives in the Ohio River Basin

VII. Bedrock and Soil Types

- High levels of coal, location of main bituminous coal field in PA
- Entire watershed located in an area that is high plateaus and glacial impacts
- Sandstone, shale, coal, and limestone
- Soil and rock deposits from glacial recession
- Mixed topography, terrace stream patterns (streams running parallel to one another due to topography)
- Abundance of oil and gas fields

VIII. Emissions into Water

1. Past:

- PCB's
- Metals



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(VIII. Emissions into Water cont.)

2. Present:

- Pesticides/ Nutrients
- Sediment

IX. Regulations Concerning Watershed

- No watershed specific regulations at this time.

X. Water Usage

- Public, commercial, industrial, domestic, thermoelectric power, mining, livestock, irrigation, wastewater treatment, reservoirs
- Allegheny Reservoir- 370 billion gallon capacity
- 50 billion gallons consumed daily from the Ohio River
- Transportation: over 230 million tons of cargo transported on the Ohio River each year, 70% of which are coal and energy products
- Home to approximately 150 species of fish
- Large amounts of energy production from hydroelectric dams

XI. Threats

- Pesticide emissions from agricultural runoff
- pH problems caused by acid mine drainage
- Habitat loss and destruction along river banks due to industry and development
- Low dissolved oxygen levels due to eutrophication causing fish kills and population declines
- High turbidity levels due to high rates of soil erosion and run-off
- Because of the Ohio River Basin's infamous position as the leading area of industry in the US, the surrounding watershed is negatively influenced by industrial processes, run-off and emissions into the river
- The Basin's industries also cause acid rain problems downwind of the factories, especially areas of Vermont and the Adirondack Mountains in New York. This problem has lead to tightened restrictions on the Ohio River Watershed.
- Invasive species threaten habitats and create competition for native species as well as for the endangered species that live in the watershed



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XII. Action in the Watershed

- Creek Connections- *creekconnections.allegheny.edu*
- Blacklick Creek Watershed Association- improve watershed quality and education.
- Clarion River Basin Commission
- French and Pickering Creeks Trust- *www.frenchandpickering.org*
- Local River Advocates- Allegheny River- *www.amrivers.org*
- Mill Creek Coalition of Clarion and Jefferson Counties- *www.knowbd.com/mccc*
- Sewickley Creek Watershed Association
- Southern Alleghenies Conservancy- water quality protection, wetland protection and construction, habitat protection, recreational park facilities, forest and urban forest stewardship, sustainable agriculture- *www.ctcnet.net/sac*
- Youghiogheny Fisherman's Association- sustainable use of watershed.
- Ohio River Valley Water Sanitation Commission- *www.orsanco.org*
- Ohio Valley Environmental Coalition- *www.ohrec.org*
- Ohio River Basin Consortium for Research and Education- *www.orbcre.org*