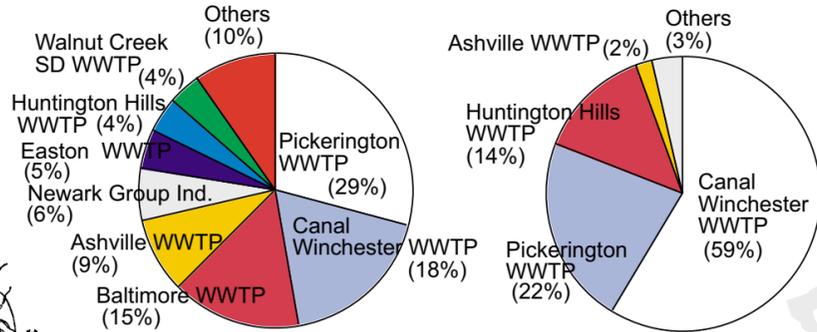


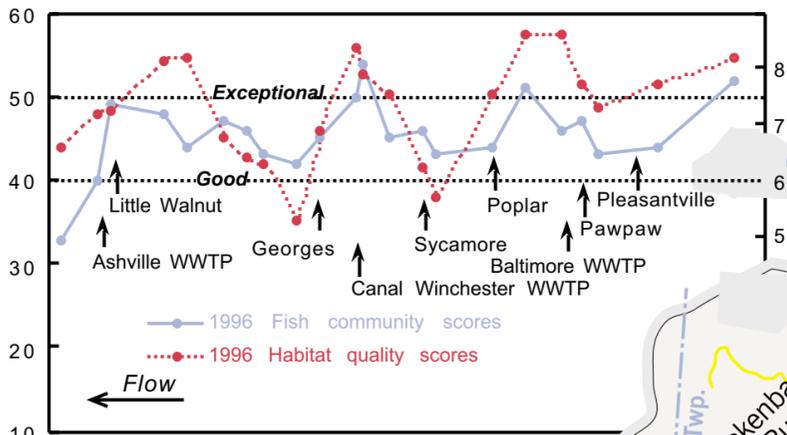
Chemical Water Quality

Ohio EPA tests stream water and the treated water discharged by facilities. The amount of nutrients, oxygen using substances, bacteria, metals and other pollutants in a sample can be used to identify pollution sources. The pie graphs show most of the treated water in Walnut Creek is from municipal wastewater treatment plants (WWTPs). Ammonia can be toxic to aquatic life and is a difficult nutrient for WWTPs to treat. Compare the two graphs to see which WWTPs remove ammonia better.



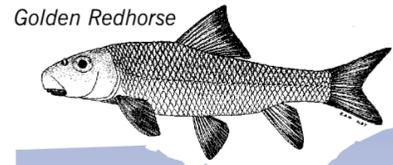
Total wastewater from facilities in the Walnut Creek basin

Total ammonia from facilities in the Walnut Creek basin



Stream Habitat

Types and amounts of rocks and other substrates, cover, channel conditions, basin land use, and streamside vegetation are critical to aquatic life. The line graph shows the best fish populations in Walnut Creek live where habitat conditions are very good. In prior studies, pollution from wastewater treatment facilities degraded Walnut Creek. Since this pollution has been corrected, colors on the map tend to show the quality of stream habitat and stream health. Better habitat depends on land owners to adopt better land management practices. The consensus needed to improve habitat may be difficult to obtain.



Walnut Creek:
 Length: 54.4 miles
 Gradient: 9.4 ft/mi
 Drainage Area: 286 sq mi
 Fish Species: 60
 Aquatic Insect Types: 86 taxa
 Fish Consumption Advisories: None

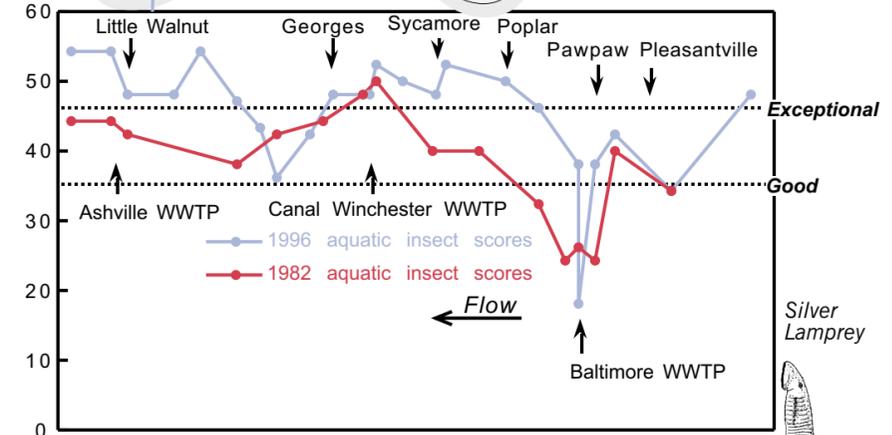
Pollution Sensitive Species

Some common aquatic animals which indicate healthy conditions in Walnut Creek are shown on this page.

Stream Health

- Exceptional
- Very Good
- Good
- Fair
- Poor
- Not Studied

In 1996 the Ohio Environmental Protection Agency evaluated the biological health and water quality of the Walnut Creek basin. Fish and aquatic insect communities, water chemistry, stream sediments, and habitat types were studied. Very good conditions exist in most of Walnut Creek. Many tributaries were also assessed. Good or better conditions were most common. Rapid housing development with poor stormwater control has degraded the Georges Creek subbasin. Suburban sprawl threatens the future health of Walnut Creek. Stopping soil erosion from construction sites and keeping rain water from flowing too quickly into the creek are first steps toward improvement.



Biological Integrity

Ohio EPA uses a grading system to score biological integrity at various sites within a basin. The types and numbers of different fish, eating and breeding patterns, and the ability to survive in polluted conditions are some factors of biological integrity. Aquatic insects also reflect the health of the stream in which they live. Only a few types are tolerant of pollution. A healthy stream is home to a diverse array of life. Based on the types of animals in a stream, Ohio EPA is able to determine the health of an aquatic environment.

