

The Maryland Department of Natural Resources has rated the quality of streams using the Maryland Biological Stream Survey (MBSS). Based on the MBSS, most streams have been categorized as having poor habitat and biological health, and elevated nutrient levels, while still supporting and maintaining a diversity of biological life.

The Anne Arundel County Department of Public Works has rated the quality of 410 miles of county streams through their Watershed Ecosystem and Restoration Services division (WERS) and reached similar conclusions. High levels of sediment erosion plague 33% of stream miles, and 53% of physical habitats are severely degraded. Our streams need our help!

We need volunteers to help us continue monitoring Two Run Branch and other Sanctuary streams. Volunteers collect water samples, capture fish and aquatic insects, identify songbirds, catch amphibians, and measure stream flow.

We need homeowners in the watershed to practice stewardship on their property by learning how to keep the rainwater from running off their lands, reducing nutrient runoff, reducing pesticide use, and improving habitats for wildlife.

To learn how you can help keep Two Run Branch a healthy and important aquatic habitat for fish, wildlife and people, please contact the naturalists at the Jug Bay Wetlands Sanctuary.



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Two Run Branch

Get To Know Your Local Watershed



Two Run Branch Watershed

- The watershed or drainage basin covers 846 acres.
- Two Run Branch is about 2.5 miles long from headwaters near Route 4 to the mouth at the Patuxent River.
- There are about 50 residences and a population of about 150 in the watershed.
- The watershed is composed mostly of: 554 acres of forest (65% of total), 142 acres of residential (17%), and 117 acres of agriculture fields (14%).
- About 158 acres of the watershed (19%) are covered with impervious surface.
- About 133 acres of the watershed (16%) is within the Jug Bay Wetlands Sanctuary.

Life in the Creek

Two Run Branch is full of life. For more than 20 years, Sanctuary volunteers and staff have studied the creek and have monitored its environmental conditions. Fish, crayfish, salamanders, aquatic insects and queen snakes all live in the creek. We have identified 25 species of fish and 15 families of aquatic insects. Songbirds, herons, and raccoons feed in the creek and on shore. A beaver pond near the mouth supports muskrats, wood ducks, painted turtles and frogs. Bald eagles nest on tall trees over the water.



Environmental Problems

Two Run Branch suffers from an overload of sediments and nutrients. Sediments (silt and clay) make the water murky and smothers aquatic plants. Excessive runoff during floods causes down cutting of the stream banks and in many areas the creek has become disconnected from its floodplain. Creek waters only flood the adjacent non-tidal wetlands during extreme events. Culverts under Pindell Road channel the water into a torrent

during heavy rains, causing excessive erosion. Nutrients from septic tanks and agricultural fields can cause over enrichment of the water.

For two decades Sanctuary volunteers have assessed stream health by collecting water samples, and by monitoring fish and aquatic insect populations. Our studies reveal that Two Run ranks Fair to Good when compared with other county streams.

Solutions

Solutions to improving the condition of Two Run Branch rest mostly with private landowners. Homeowners can:

- reduce the size of lawns and impervious surfaces
- stabilize exposed soil
- use rain barrels
- maintain septic tanks
- plant wildlife habitats
- pick up pet waste
- reduce fertilizer and pesticide use

