

**Maryland Biological Stream Survey (MBSS)
Potomac Garrett State Forest**

The Garrett/Potomac State Forests are located within three of Maryland’s 8-digit watersheds. These watersheds are Potomac River Upper North Branch and Savage River in the Chesapeake Bay Drainage and the Youghiogheny River in the Ohio River Drainage.

The total miles of streams by Strahler stream order in each watershed is presented in Table X.

Table X: Strahler Stream Order by Watershed

Watershed	Stream Order				
	1st	2nd	3rd	4th	5th
Potomac River Upper North Branch	90.7	22.1	7.5	33.1	0
Savage River	96.3	21.8	16.8	5.0	0
Chesapeake Bay Total	187.0	43.9	24.3	38.1	0
Youghiogheny River	166.8	52.5	30.0	7.1	19.8
Ohio River Total	166.8	52.5	30.0	7.1	19.8
Grand Total	353.8	96.4	54.3	45.2	19.8

Stream Condition

The Maryland Biological Stream Survey (MBSS) has randomly sampled streams across the state of Maryland to assess stream ecological condition. Stream condition is measured using information collected from the fish and the benthic macroinvertebrate communities. This information is analyzed and reported in one of four categories; good, fair, poor or very poor. The results for the three Garrett/Potomac State Forests watersheds are presented in Table X for fish and Table X for benthic macroinvertebrates compared with statewide watershed condition.

TableX: Estimated Percent of Stream Miles in Each Watershed By Category; Fish Index of Biotic Integrity Compared to Statewide Condition

Watershed	Good	Fair	Poor	Very Poor	Not Rated
Potomac River Upper North Branch	10.0	20.0	40.0	30.0	0.0
Savage River	57.1	28.6	7.1	0.0	7.1
Youghiogheny River	18.8	31.3	50.0	0.0	0.0
STATEWIDE	26.0	25.0	21.0	19.0	9.0

Table X: Estimated Percent of Stream Miles in Each Watershed By Category; Benthic Index of Biotic Integrity Compared to Statewide Condition

Watershed	Good	Fair	Poor	Very Poor	Not Rated
Potomac River					
Upper North Branch	20.0	40.0	30.0	10.0	0.0
Savage River	85.7	7.1	7.1	0.0	0.0
Youghiogheny River	37.5	25.0	25.0	12.5	0
STATEWIDE	26.0	28.0	30.0	16.0	0

Aquatic Biodiversity

The Garrett/Potomac State Forests is located within two of the 159 Stronghold Watersheds. Stronghold Watersheds are the 12-digit watersheds that are the most important to protect in order to preserve Maryland's aquatic biodiversity. More information on Stronghold Watersheds can be found on the MBSS website (<http://www.dnr.state.md.us/streams/pdfs/StrongholdFactSheet.pdf>). The stronghold watersheds in the Garrett/Potomac State Forests are important for the conservation of several state rare, threatened, or endangered species. These species include Johnny darter, mottled sculpin, and brook trout.

The MBSS has collected information on non-native aquatic species. Eleven non-native fishes have been found on or in close proximity to the Garrett/Potomac State Forest. The eleven non-native species are fathead minnow, golden shiner, brown trout, rainbow trout, largemouth bass, smallmouth bass, black crappie, rock bass, green sunfish, pumpkinseed and bluegill.

The MBSS has a long-term monitoring network called the Sentinel Site Network. This is a network of twenty-seven sites used to monitor the natural variability of streams and to investigate the possible effects to streams due to global climate change. These sites are the highest-quality sites identified by the MBSS with the least amount of anthropogenic influence in the upstream catchment. Two of the twenty-seven Sentinel Sites have portions of their upstream catchment located within the Garrett/Potomac State Forests.

Special Areas

Bull Glade Run is located on Garrett State Forest property. The MBSS has sampled Bull Glade Run 15 times during 1994 and 1995. No fish were observed at any of the 15 sampled stream sites. The upstream land use to all of the sites, calculated from the National Land Cover Dataset, is forest. MBSS field crews noted that the natural setting around sites appeared to be a bog. There is little evidence of anthropogenic stressors to the stream, and the field crews did not note evidence of acid mine drainage at the sites. Measure pH values were low at all sites. It is likely that Bull Glade Run is naturally acidic.