

Loudoun County Perennial Stream Assessment

Loudoun County, Virginia



Biohabitats was contracted to perform an assessment of perennial streams throughout all the watersheds within Loudoun County. The County extends from the Blue Ridge Mountains in the west, down to the piedmont region in the east, with the Potomac River forming its northern border. Prior to this assessment there were approximately 1,137 miles of perennial streams and 2,033 miles of nonperennial streams identified by United States Geologic Survey (USGS) topographic

The Loudoun County perennial stream assessment identified stream reaches in an effort to better understand and improve the ecological health of the region. The work that Biohabitats accomplished could potentially result in the protection of an additional 2,033 linear feet of streams Loudoun County under the Chesapeake Bay Preservation Act.

maps. Biohabitats' goal was to validate the points identified and extend the limits of perenniality if necessary.

Biohabitats' field crews utilized a protocol for identifying perennial streams which was first developed by the U.S. Army Corps of Engineers and later revised by Fairfax County, Virginia to be utilized on a local level. The protocol includes assessments of the following stream parameters: 1) streamflow and hydrology; 2) geomorphology; 3) stream-bed soils; 4) vegetation; 5) aquatic invertebrates; and 6) vertebrates (fish, amphibians). Biohabitats made the final determination of the perennial break point along respective stream segments by using

scoring characteristics within these categories. Through weeks of field data collection, the Biohabitats team came to the conclusion that the majority of the streams identified by the USGS as intermittent streams were in fact perennial.

The data was collected using hand-held GPS devices for entry into a database. This data will be further utilized by Loudoun County to potentially develop resource protection areas as defined by the Chesapeake Bay Preservation Act.

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