

Loudoun County Western Hills Watershed Management

Loudoun County, Virginia



Assessing watersheds before water quality projects are added to a capital program helps the decision makers use the community's funds to the most benefit.

SERVICES

Water Strategies

Loudoun County first created a foundation for watershed management in 2006 to combat degradation from recent development and a history of agricultural uses. Building off that foundation, Biohabitats supported Tetra Tech in the development of a second watershed plan for the Western Hills Management Area, where many are dependent on groundwater for their domestic water supply.

Goals included improving water quality and habitat condition; reducing volume and velocity of stormwater runoff, erosion and degradation, and sediment transport; and addressing the effects of planned development. Biohabitats assessed stream conditions and opportunities to install or retrofit stormwater facilities. Conditions were assessed along tributaries of the Potomac River in compliance with the Virginia Department of Environmental Quality's (DEQ) protocols.

Field crews identified erosion sites and performed a habitat assessment at each unique stream reach. The team also collected locations of exposed pipes, inadequate buffers, fish blockages, pipe outfalls, and channel alterations. Biohabitats assessed upland areas with facilities that did not meet water quality standards, and sites with significant impervious areas. Considering Virginia Dam standards and DEQ's facility guidance, the team suggested potential projects.

The data collected and the restoration sites identified will help the county prioritize potential projects in its stormwater program while meeting the requirements of its Chesapeake Bay Program Watershed Implementation Plan and its MS4 permit.