

STORMWATER BMP SITES IN PAXTON CREEK WATERSHED

BMP Type: Linglestown Methodist Church Riparian Buffer



Methodist Church Riparian Buffer

Name and Location: Linglestown United Methodist Church, 1430 North Mountain Road (north of Rt. 39 square in Linglestown), Lower Paxton Township.

Project Site Number and BMP Type Code: 54C

GPS Coordinates: Lat N40.34491 degrees, Long W76.79288 degrees

Site Features: Riparian buffers are vegetation (trees, shrubs, herbaceous perennials) alongside waterways. Buffers provide many benefits: partial protection from overland stormwater runoff (containing pollutants) that can enter the creek; shade for the creek that helps cool stream waters, and enhance dissolved oxygen levels in water; habitat (living places) for water and land-based creatures; other benefits. Buffers are the single, most important type of best management practice for runoff, particularly for headwaters and slightly degraded streams. Buffers are often designed for 3 vegetative zones, extending from tops of creek banks for 35 or more feet (100 feet recommended for most areas). Expected pollutant removals in fully functioning riparian buffers are approximately: total suspended solids (mainly dirt), 65%; total phosphorus, 50%; nitrate, 50%. In the rear of Linglestown United Methodist Church is a long grassy slope draining to a wetland. Parents and boys of Cub Scout Pack 360 (Holy Name of Jesus Catholic Church), with PCWEA, church members, and others planted a tree and shrub buffer of native vegetation in 2006. Of the approximately 50 trees and shrubs installed with tree covers, plastic tubes for protecting vegetation from deer and rodent predation (mainly bark girdling), only 18 remain. The demise of most vegetation is due to multiple factors: inadequate watering of planted vegetation in subsequent weeks after planting; black tree covers (4" drain pipe) that were opaque to light (greatly limiting potential photosynthesis by the plants); mowing around the trees even to the wetland edge (which compacted soils, and reduced stormwater infiltration). The main lesson to be learned: maintenance agreements need to be in place before project installations begin.

Site Directions: North Mountain Road runs N-S between Rt. 39 (Linglestown Road) and Rt. 22 (Allentown Boulevard) in Lower Paxton Township. The church site is 0.1 mi N. from the Linglestown square, a monument and flagpole in the middle of Rt. 39 at its intersection with N. Mountain Road. Access to the site is via a lane that goes around the

church to a parking area at the back, located behind of the church. North Mountain Road is also at an interchange (No. 72) of Interstate highway 81, located 1.1 mi from Linglestown square.