

# STORMWATER BMP SITES IN PAXTON CREEK WATERSHED

## BMP Type: Roadside Vegetated Swale-Rain Garden & Riprap



Roadside Vegetated Swale-Rain Garden

**Name and Location:** Vegetated swale-rain garden is located alongside Paxton Church Road near the intersection with Richert Road in Susquehanna Township

**Project Site Number and BMP Type Code:** 12J-B, O

**GPS Coordinates:** Lat N40.31373 degrees, Long W76.86025 degrees

**Site Features:** This narrow, somewhat triangular, vegetated swale-modified rain garden is designed to handle stormwater runoff from a short section (150 linear feet) of nearby Paxton Church Road. The road runoff joins Lower Paxton Creek North Subwatershed drainage, as the creek meanders westward, eventually crossing under Rt. 322, and into Wildwood Park. The swale-rain garden is a combination BMP together with riprap (boulders) applied to an embankment underneath a road guardrail that was being undermined by creek erosion. Besides reducing erosion, the swale-garden vegetation serves important functions: stormwater absorption, and partial pollutants removal during growing seasons. A large berm on the down slope edge of the swale-garden temporarily helps store runoff during heavy storm events; the swale-garden has 2 feet of amended soils that replaced clay. The vegetation consists of Red Osier Dogwood, and Ninebark shrubs, surrounded by a heavy wood mulch of 3-4 inches thick to reduce weeds growth; grasses on the berm exist for soils stabilization; other herbaceous perennial plants were not used for maintenance ease. The BMP has a down slope rock drain. Approximate pollutant removals in fully functioning vegetated swales are: total suspended solids (mainly dirt), 50%; total phosphorus, 50%; nitrate, 20%. The pollutant removal efficiency varies by season (greater removal in spring and summer), and by swale condition (declines as vegetation dies or is smothered, and soil voids become clogged). Traffic warning signs are present in the swale-garden, so as to discourage motorists who might attempt to park vehicles at the site.

**Site Directions:** The BMP swale-rain garden is near the end of 300 feet of riprap, protecting a creek embankment across from the intersection of Richert and Paxton Church Roads in Susquehanna Township. This site is 0.25 mile west of the intersection of Paxton Church Road and North Progress Avenue.