

SUCCESS WITH VEGETATED SWALES

One of the most popular green storm water practices is the vegetated swale, also commonly known as a bio-swale or eco-swale. These swales are increasingly utilized as an environmentally sound alternative to curb and pipe installation for conveying storm water from impervious surfaces to other BMPs such as bio-retention basins. When water is conveyed in a pipe, there is no chance to mitigate its quality or quantity. However, in a vegetated swale, the plants filter sediment and nutrients while some of the storm water is lost through infiltration and evapotranspiration.

Like other vegetated storm water practices, plant selection is crucial to a successful swale installation. Most of the same plant species utilized in rain gardens may also be utilized in swales, however the installation should emphasize graminoids (grasses and sedges) due to their superior root systems for erosion control. Some sort of erosion control fabric is typically necessary during the plant establishment period.

The plant community in these swales may be established via plugs or via seed such as our [bio-swale mix](#). Plugs should be utilized in high visibility situations or particularly wet swales where water may stand. The plug mix should consist of at least two-thirds grasses and sedges, and up to 1/3 forbs. Some particularly functional species in vegetated swales include: Riverbank Tussock Sedge (*Carex emoryi*), Yellow Fox Sedge (*Carex annectens* var *xanthocarpa*), Meadow Sedge (*Carex granularis*), Field Oval Sedge (*Carex molesta*), and Reddish Bulrush (*Scirpus pendulus*). A variety of forbs may be utilized to add color and diversity to a bio-swale planting. Some of the most adaptable include: New England Aster (*Aster novae-angliae*), Autumn Sneezeweed (*Helenium autumnale*), Blue Flag (*Iris virginica* var *shrevei*), Foxglove Beardtongue (*Penstemon digitalis*), Sweet Black-Eyed Susan (*Rudbeckia subtomentosa*), and Riddell's Goldenrod (*Solidago riddellii*).



PLANT FEATURE: FILIPENDULA RUBRA (QUEEN OF THE PRAIRIE)



One of our most spectacular native wildflowers, Queen of the Prairie, is a common denizen of high quality fens in central Indiana. Although it is quite rare throughout most of its range, the fens of east central Indiana and western Ohio harbor many of the strongest remaining populations. The spectacular wands of frothy pink flowers commence in late June and continue through the middle of July. In its native habitat it often grows 5 to 6 feet tall while in better drained soils in cultivation 4 to 5 feet is more typical. The deeply divided foliage is attractive throughout the growing season. In the landscape, it does best in consistently moist soil. It is an excellent plant for moist rain gardens where water ponds up to 48 hours. It should not be used in rain gardens utilizing free-draining sandy engineered soil mixes, as it suffers in droughty conditions. In a restoration it should be included in restored wetlands on organic soils following tile removal with associates listed in our [sedge meadow mix](#).