

## BIO-RETENTION PLANTS FOR ENGINEERED SOIL MIXES

As more and more infiltration BMPs are put onto the landscape, it has become quite evident that those utilizing an engineered soil mix and under drain are quite dry during much of the growing season. In this situation, a plant's drought tolerance becomes more important than wet tolerance for its long-term survival. When wetland plants are utilized in these basins, they do well during wet spring weather, but tend to languish during extended summer dry spells, eventually succumbing to repeated summer droughts.

In basins where standing water only lingers for a few hours after a rain event, it is vital to choose the species from our [rain garden table](#) that are indicated as drought tolerant. However, since plants in this environment do not need to be very wet-tolerant, you may also choose from a variety of upland prairie plants not typically recommended for rain gardens. Some plants not on our rain garden table that will grow in this situation include:

Smooth Blue Aster (*Aster laevis*)  
 Plains Coreopsis (*Coreopsis palmata*)  
 Rattlesnake Master (*Eryngium yuccifolium*)  
 Western Sunflower (*Helianthus occidentalis*)  
 Prairie Sundrops (*Oenothera pilosella*)  
 Wild Quinine (*Parthenium integrifolium*)  
 Hairy Beardtongue (*Penstemon hirsutus*)  
 Narrow-Leaf Mountain Mint (*Pycnanthemum tenuifolium*)  
 Early Goldenrod (*Solidago juncea*)  
 Ohio Spiderwort (*Tradescantia ohioensis*)  
 Plains Oval Sedge (*Carex brevior*)  
 Northern Sea Oats (*Chasmanthium latifolium*)



Newly installed Switchgrass (*Panicum virgatum*) in a well-drained bio-retention basin

## PLANT FEATURE: WILD QUININE (*PARTHENIUM INTEGRIFOLIUM*)



A common denizen of mesic to dry prairies and savannas in northwest Indiana, Wild Quinine is a tap-rooted composite with showy white flowers throughout the summer. This plant breaks dormancy relatively late for a forb, typically appearing in late April. Large toothed basal leaves appear first, followed by 2 to 3 foot flower stalks that grow rapidly in late May and Early June. By mid June, the white flower heads begin to appear. While the primary flower season for this plant is July and early August, the flower buds are white and the flowers remain white well past their pollination stage, often into September, therefore the plants appear to be in bloom from June to September. Wild Quinine thrives in full sun, growing best in well-drained loamy or sandy soils. It will tolerate partial shade, but may not bloom every year in shadier locations. In a restoration, Wild Quinine should be utilized with a wide diversity of other prairie species such as those contained in our [Mesic Prairie Mix](#), [Diverse Prairie Mix](#), or [Low Stature Prairie Mix](#).