

When It Rains Too Much on Your Rain Garden

Much of central Indiana has once again suffered from extraordinary rainfall between late April and mid July. This has been a pattern in recent years that was particularly evident in 2015 and 2017. Heavier rains are related to warmer water temperatures in the Gulf of Mexico that infuse the atmosphere with increasing amounts of water vapor. When combined with persistent weather patterns, this moisture can result in copious amounts of rainfall. At my home near Anderson, Indiana, I received 36 inches of rain between April 28th and July 28th. This represents approximately three times the average rainfall for these three months and 90% of our normal annual total of 40 inches.

These persistent heavy rains can stress even the best designed storm water BMPs. Particularly vulnerable are rain gardens that utilize existing soil with no underdrain. Frequent heavy precipitation often occurs at intervals insufficient to allow the water to drain between rain events. As a result, plants installed in the bottom of the basin are left in persistent standing water for days or even weeks at a time. Since the plants used in rain gardens are not emergent species, they may succumb to this persistent inundation.

Fortunately, our flora does contain species that can tolerate these extended periods of inundation. Many of the graminoids used in rain gardens, particularly the sedges, will survive inundation for up to several weeks at a time. Some of the most durable graminoids include switchgrass (*Panicum virgatum*), riverbank tussock sedge (*Carex emoryi*), Frank's sedge (*Carex frankii*), burr sedge (*Carex grayi*), and fox sedge (*Carex vulpinoidea*).

While rain garden forbs are generally less tolerant of persistent inundation, a few species will survive these periods. Included in these are wild senna (*Senna hebecarpa*), swamp rose mallow (*Hibiscus palustris*), blue flag (*Iris virginica var shrevei*), monkey flower (*Mimulus ringens*), sweet black-eyed susan (*Rudbeckia subtomentosa*), and sneezeweed (*Helenium autumnale*).

Plant Feature—Allegheny Monkeyflower (*Mimulus ringens*)

A common species of wetlands throughout the northeastern quarter of the United States, Allegheny monkeyflower is easily established in constructed wetlands via plants or seeds. The lavender flowers bloom in July and August, resembling cultivated snapdragons. The plants reach up to 3 feet in height and prefer full sun or partial shade in wet soil. They thrive in moist rain gardens and will tolerate inundation for several days during unseasonably wet weather. The tiny seeds are among the smallest of our native flora at 2.3 million seeds per oz. Therefore, they must be sown on the surface of wet soil for successful recruitment.

In a rain garden, monkeyflower should be planted in areas that remain moist to wet with other species that prefer wet soils such as Blue Flag (*Iris virginica var shrevei*), Autumn Sneezeweed (*Helenium autumnale*), and Fox Sedge (*Carex vulpinoidea*). In a restoration, Allegheny Monkeyflower should be used in soils that remain saturated during much of the growing season with associates from our [Sedge Meadow Mix](#).

