

ABSTRACT

*Suburban development in dry-land locations requires stormwater controls that are both functional and visually acceptable thus requiring an understanding of establishment and growth of drought-tolerant vegetation that matches dry soil and climatic conditions. Profiled here is a case study of four projects, constructed from 2007-2014 under drought conditions, deploying native and non-native drought tolerant species planted under different aesthetic themes in four settings: residential green space, residential street ROW, residential lot, and civic gardens. The systems use sand and pervious engineered growing media to allow for stormwater infiltration and underdrains to de-water in non-percolating sub-soils. Described here are the proposed vegetative selections and landscape design intentions. Results of a field inventory showed good survival and health in *Ilex vomitoria* (Yaupon Holly), *Acer ginnala* (Amur Maple), *Perovskia atriplicifolia* (Russian Sage), *Hemerocallis* spp. (Daylilies), *Artemisia 'Powis Castle'* (Wormwood), *Salvia greggi* (Autumn Sage), and *Schizachyrium scoparium* (Little Bluestem). The mesic-hydric adaptive growers of *Itea virginica* (Virginia Sweetspire), and *Juncus effusus* (Rush) had limited survival and poor health. And in a comparative sub-set study using in-field Normalized Differential Vegetation Index (NDVI) recordings, street right of way bioretention systems (0.48) were more productive than traditional tree lawns (0.38). Recommended are two plant palette leads for consideration.*