8-1-2016

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Curb-Cut Rain Garden Research
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Introduction
Project Description
In 2015 several curb-cut rain gardens were installed in the Alger Heights neighborhood. These gardens receive stormwater runoff from the street gutters through a cut in the curb (Fig 1). We assessed the success of 11 of these gardens, as well as the success of individual species planted within them after 1 year of growth.

Figure 1: In a curb-cut rain garden stormwater runoff enters into a rocky basin through a literal cut in the curb; native plants assist in filtering and evapotranspiring the trapped rainwater.

Objectives
• Identify which gardens are the most successful
• Identify variables that influence garden success
• Evaluate survivorship of native species
• Evaluate performance of native species

Methods
Average height (composted)
p=.01
Evaluate performance of native species
p<.01
the trapped rainwater.
runoff enters into a

Average survivorship (composted)
Identify which gardens are the most successful
Identify variables that influence garden success

Species Results
p<.01
Hairy beardtongue
Evaluate survivorship of native species
Composted
Prairie dropseed
Lew, Joel

Figure 3: Examples of low and high performance values. Eriochloa (left) has no flowering stalks, no buds, and has not spread received a performance value of 1; Liatris (right) has grown wider and taller, is flowering profusely and received a performance value of 10.

Figure 3: Examples of low and high performance values. Eriochloa (left) has no flowering stalks, no buds, and has not spread received a performance value of 1; Liatris (right) has grown wider and taller, is flowering profusely and received a performance value of 10.

Garden Results
Average Performance of Gardens
Average Survivorship of Gardens
Figure 5: Comparison of average performance and survivorship of Composted (dark orange) and non composted (lighter orange) gardens.

Figure 5: Comparison of average performance and survivorship of Composted (dark orange) and non composted (lighter orange) gardens.

Conclusions
Garden-by-Garden
Garden success was strongly influenced by the addition of compost. Composted gardens had higher performance ratings and survivorship than non-composted rain gardens. Other variables, including amount of care provided by homeowners, volume of water entering the curb-cut, amount of shade or sun, etc., are also likely contributors and should be assessed in future studies.

Species
The best species to use in these urban curb-cut rain gardens are Wild bergamot, Ohio spiderwort, and Pennsylvania sedge, although several others did well too. The species that struggled the most were Butterfly weed and Wild Lupine. Given the popularity of these two species in particular, learning how best to improve their performance should be a priority.

Acknowledgements
This work received significant contributions from Deanna Geelhoed, Micah Warners, Leira Lew, Joel Betts, Leanna DeJong, Benjamin Naughtin, Jenna VanDonselaar, Maxwell DeJong, and Nick Mindorf.