

PRE AND POST PERCEPTIONS OF SUSTAINABLE LANDSCAPE DEMONSTRATION GARDEN

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PURPOSE

- Create an urban sustainable garden model to promote environmental and human health and well-being.

- Should be replicable.

<http://www.clemson.edu/cafls/demo/index.html>



- Should be measurable.
 - Perception surveys of passersby
 - Soil sampling and analysis
 - Plant health rating sheets

GUIDING PRINCIPLES

1) Environmental educational displays are needed in the busiest, hectic urban environments in order to reach and influence greater numbers and diverse people (Hester, 2006)



Photo by B. Anderson

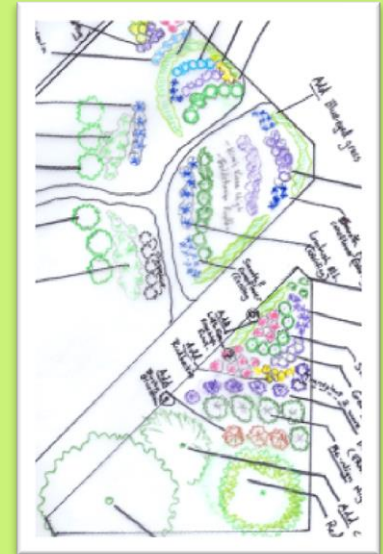
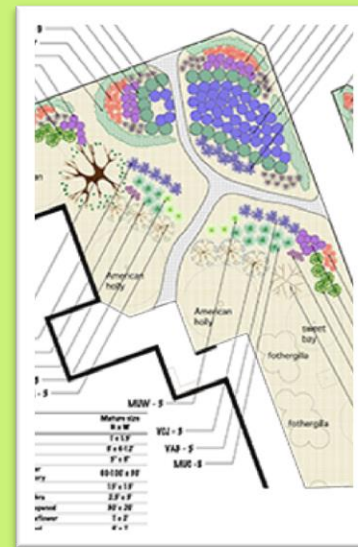


Photo by S. Lombardo

Pre-installation spaces on college campus 1,400 sf (left) 1,800 sf (right)

GUIDING PRINCIPLES

2) The display should be aesthetically pleasing as well as educational so as to generate sales and production of these less common, but environmentally beneficial plants (Nassauer, 1997)



Designs: Reburn 2011; Lombardo-Fraser (2011); White (2012); Kelly (2012)

Nassauer, J. (1997) Cultural sustainability: Aligning aesthetics and ecology. In *Placing nature: Culture and landscape ecology*. Washington, D.C.: Island Press.

GUIDING PRINCIPLES

3) The experimental nature of the garden should include a participatory role for passersby to share their opinion and judgment of the display. Participation is engaged learning and often results in greater knowledge retention and continued involvement (Hester, 2006).



Photo by E. Vincent

Hester, R. (2006) *Design for ecological democracy*. Cambridge, MA: MIT Press.

PROCESS

- Conduct a competitive design process using native plant selections to provide eco-system services, e.g. habitat and food source for native insects and animals (Tallamy, 2011).
- Install and maintain garden using low-maintenance techniques.
- Study environmental health and human perceptions.



Photo by E. Vincent

6" leaf mold compost tilled to a depth of 8"



Photo by E. Vincent

Girdling roots loosened prior to planting

PROCESS

- Provide on-site and Web educational materials.
- Student workers serve as educational ambassadors.



Photos by E. Vincent



PRE-INSTALLATION



Pre-installation spaces on college campus 1,400 sf (left) 1,800 sf (right)

Hester, R. (2006) *Design for ecological democracy*. Cambridge, MA: MIT Press.

PRE & POST INSTALLATION SURVEY DATA

On a scale of 1 to 10, how aesthetically pleasing (beautiful) is the landscape to you?

Extremely poor

Average

Extremely high

1

2

3

4

5

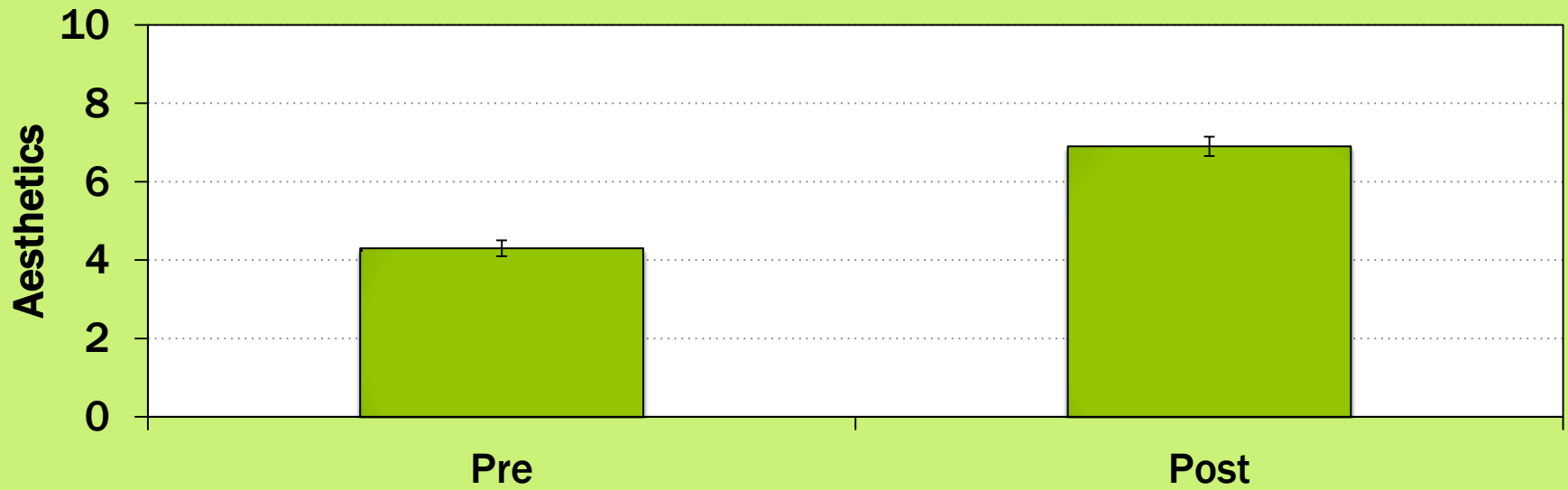
6

7

8

9

10



spring 2012 ($n = 171$), ($P < 0.0001$)

fall 2012 ($n = 86$), ($P < 0.0001$)

POST-INSTALLATION



Photos by E. Vincent



Post-installation spaces on college campus 1,400 sf (left) 1,800 sf (right)

Hester, R. (2006) *Design for ecological democracy*. Cambridge, MA: MIT Press.

PRE & POST INSTALLATION SURVEY DATA

On a scale of 1 to 10, how well maintained does the landscape here appear to you?

Extremely poor

Average

Extremely high

1

2

3

4

5

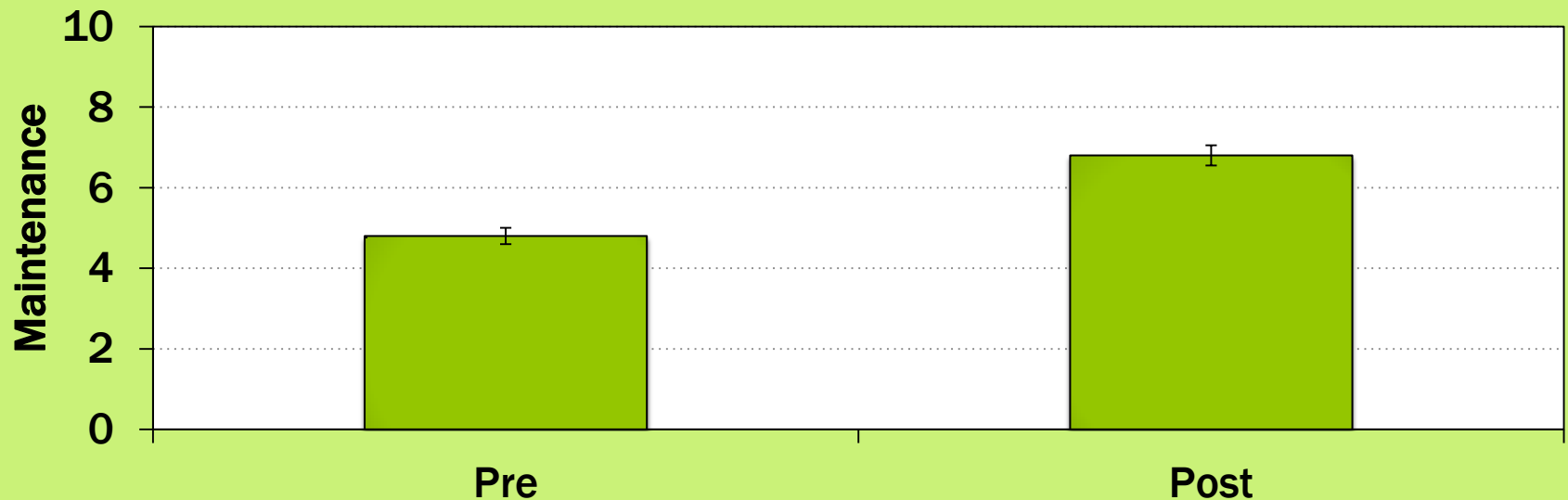
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spring 2012 ($n = 171$), ($P < 0.0001$)

fall 2012 ($n = 86$), ($P < 0.0001$)

POST INSTALLATION SUMMER 2013



Photo by E. Vincent

June 2013

INITIAL RESULTS

- Positive changes in perception of aesthetics and the quality of maintenance encouraging, considering that perennial plants generally require two complete growing seasons to reach peak performance and the post-installation survey was conducted after only one growing season.
- 38% increase in aesthetic perception
- 30% increase in landscape maintenance perception

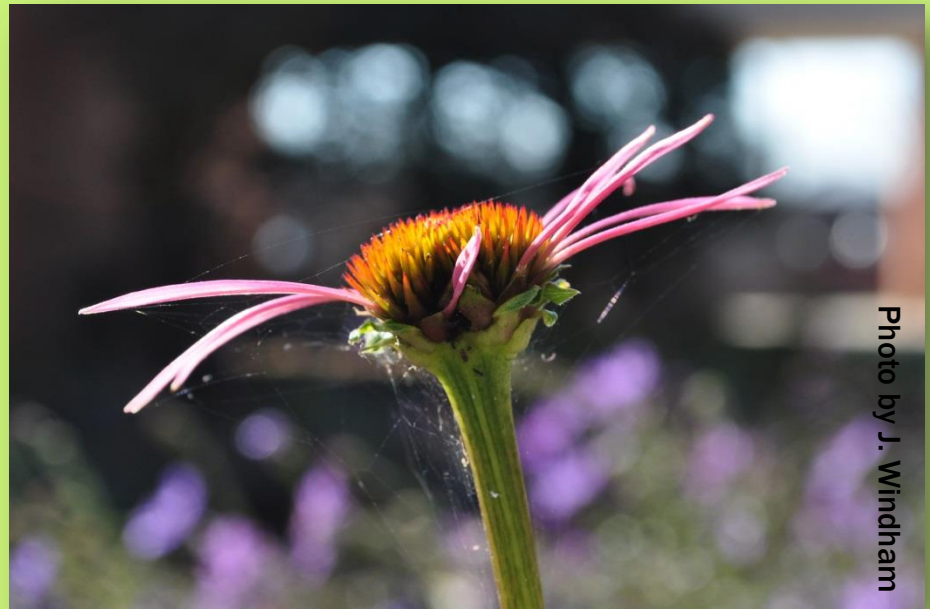


Photo by J. Windham

NEXT STEPS

- Invitations to green industry professionals, Master Gardeners, and Master Naturalists to visit the Sustainable Landscape Demonstration Garden to rate the individual plants. These plant preference ratings will be posted on the website as indicators of potential promise for native plants and will hopefully be used by producers and retailers when considering introduction of native plants into their production line or garden center stock.
- During fall 2013, preference surveys of passersby will be administered by students, and additional soil samples will be collected and analyzed.

PLANTS



Photo by J. Windham



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