

# Green Infrastructure at Missouri Botanical Garden



2024 BMP Watershed Summit  
October 16, 2024

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 MISSOURI BOTANICAL GARDEN



Photos Courtesy of Missouri Botanical Garden

**The use of vegetation, soils, landscape features, and often simple technologies to provide environmental services within a community. It is a way of building nature into development that will improve or eliminate barren areas of asphalt, concrete, and drainpipes while serving important ecological functions.**

*- Adapted from the Missouri Department of Conservation's  
Community Conservation Webpage  
[mdc.mo.gov/community-conservation](http://mdc.mo.gov/community-conservation)*

# **Defining Green Infrastructure**

# Green Infrastructure at the Garden, Butterfly House, and Shaw Nature Reserve



Simple  
Technologies

&



Vegetation

&

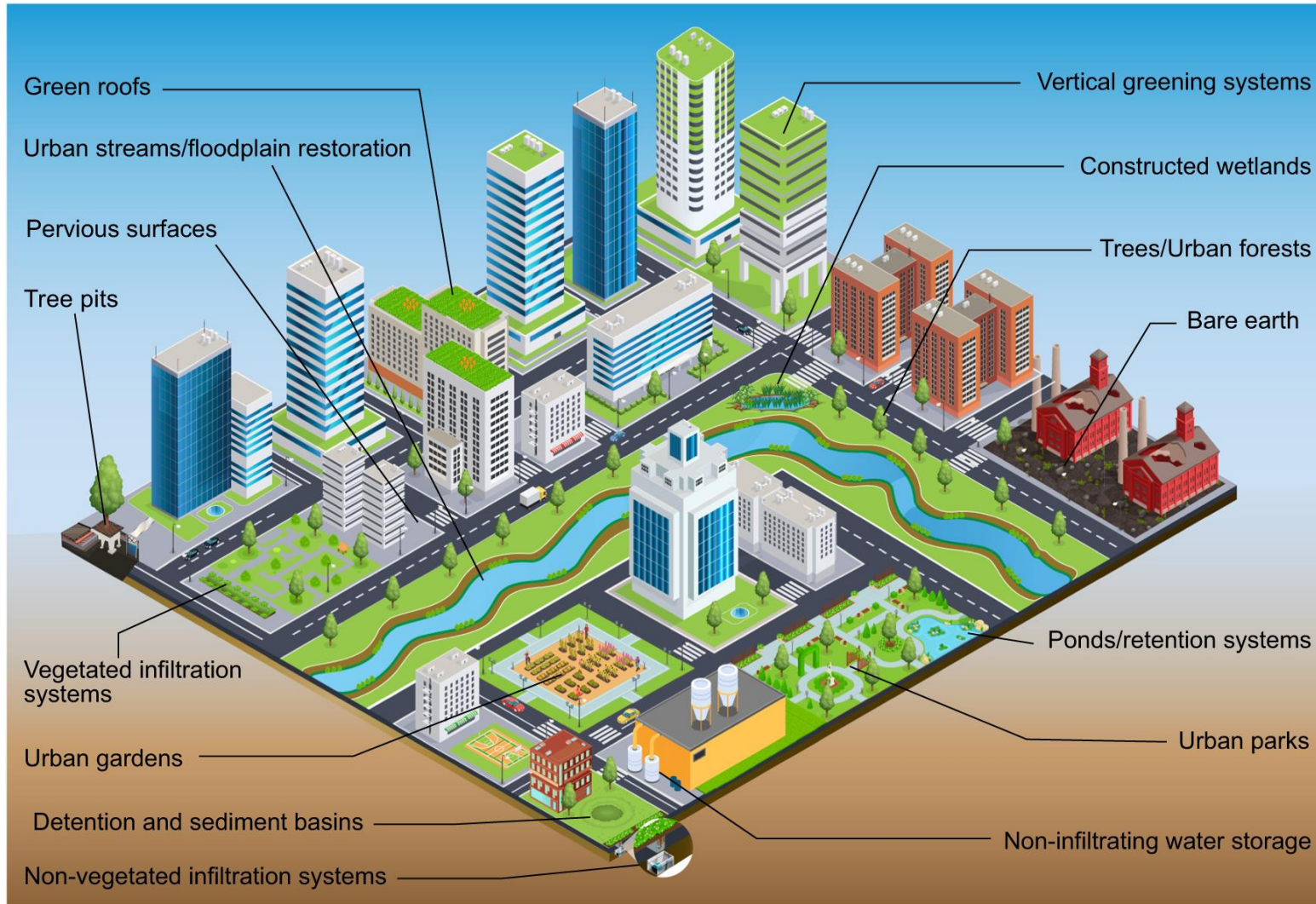


Public Engagement



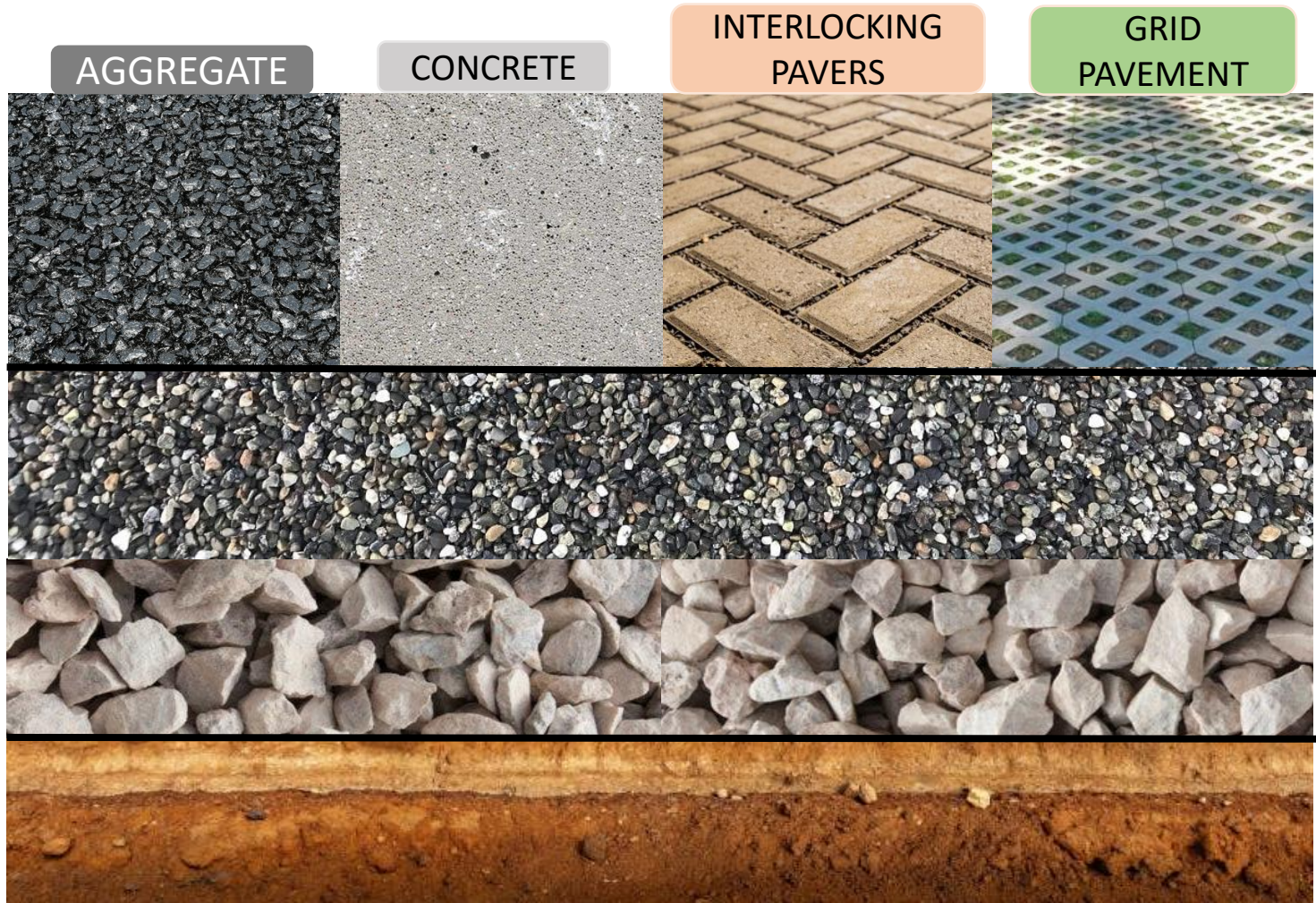


# Simple Technologies



Cook, L.M., Good, K.D., Moretti, M. *et al.* Towards the intentional multifunctionality of urban green infrastructure: a paradox of choice?. *npj Urban Sustain* 4, 12 (2024). <https://doi.org/10.1038/s42949-024-00145-0>





Porous Surface Layer

Base Layer One

Base Layer Two

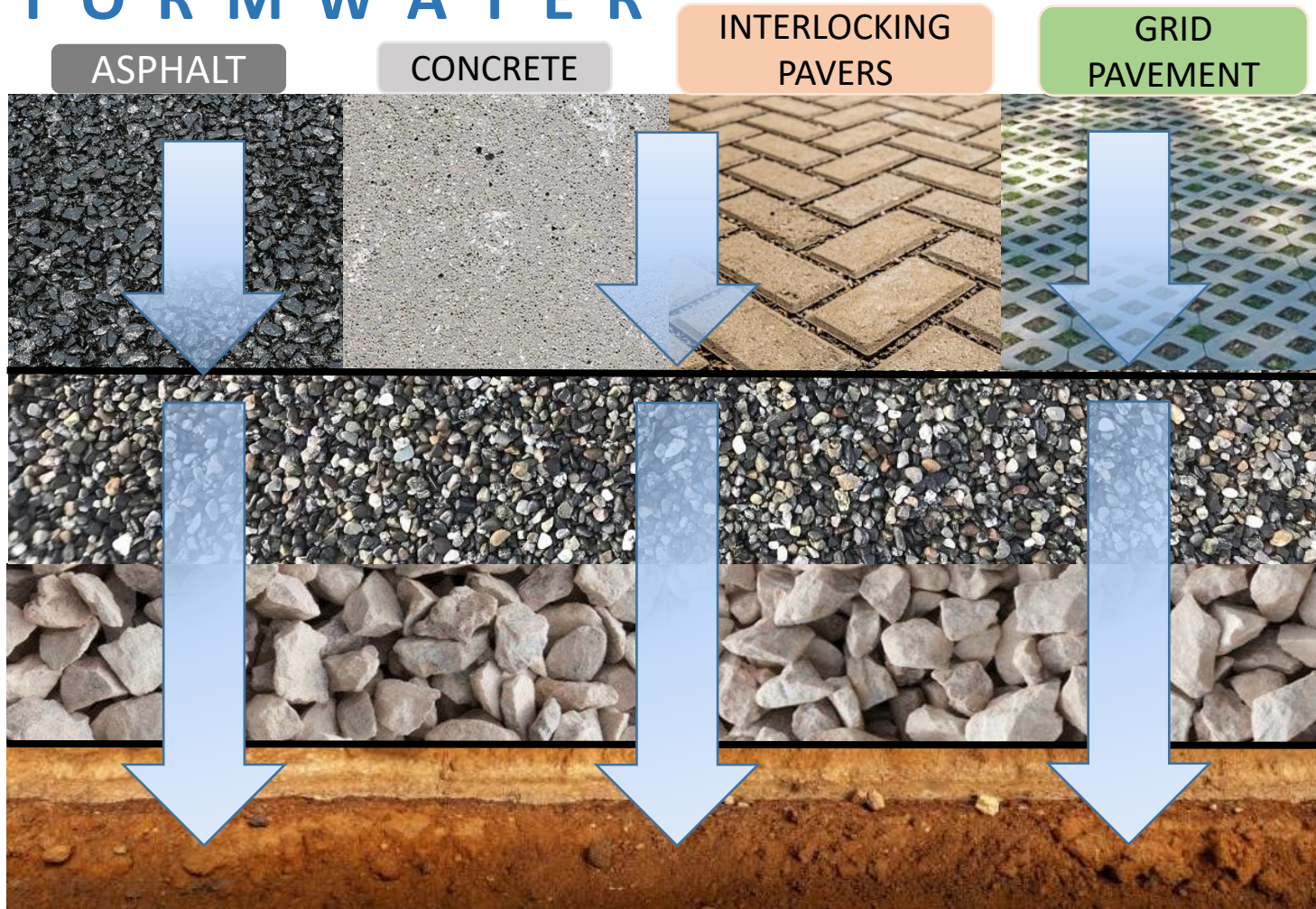
Subsoil

# Pervious Surfaces





# STORMWATER



Porous Surface Layer

Base Layer One

Base Layer Two

Subsoil

# Pervious Surfaces







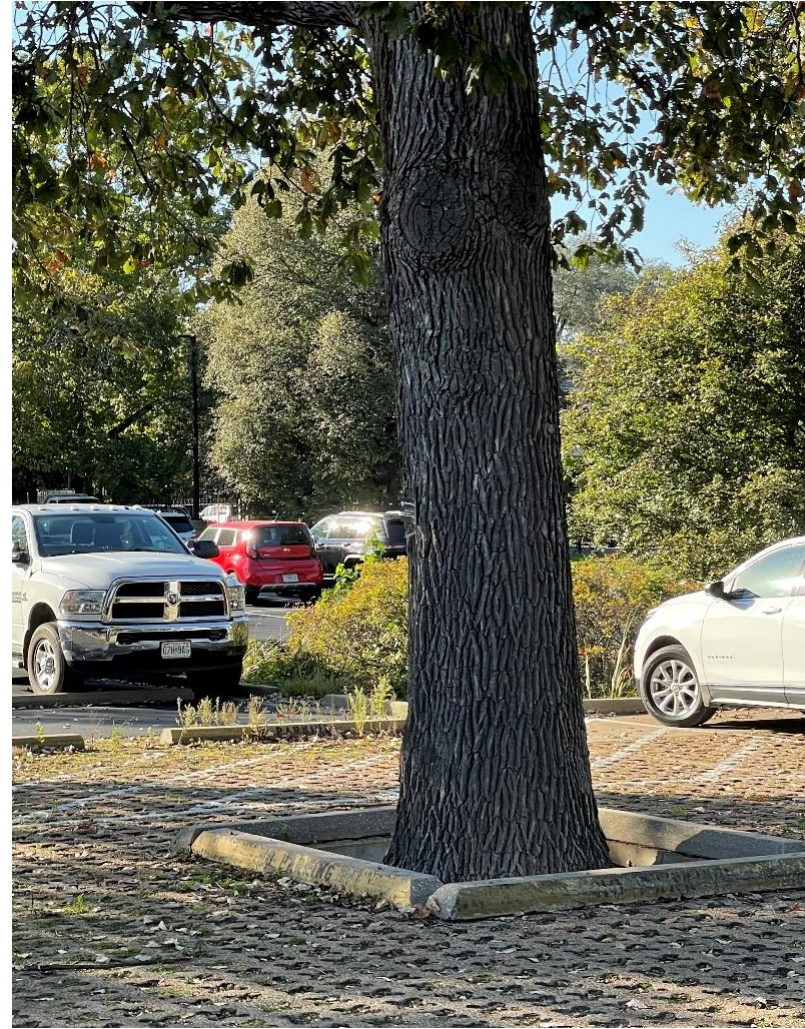
# Pervious Surfaces





# Pervious Surfaces





# Pervious Surfaces





# Rain Water Harvesting





# Kemper Center for Home Gardening

## Rain Chain & Barrel





# Climatron Cistern

*45,000 gallons*



# JCTVC Cisterns

*50,000 gallons*







# Cistern Installation Slideshow

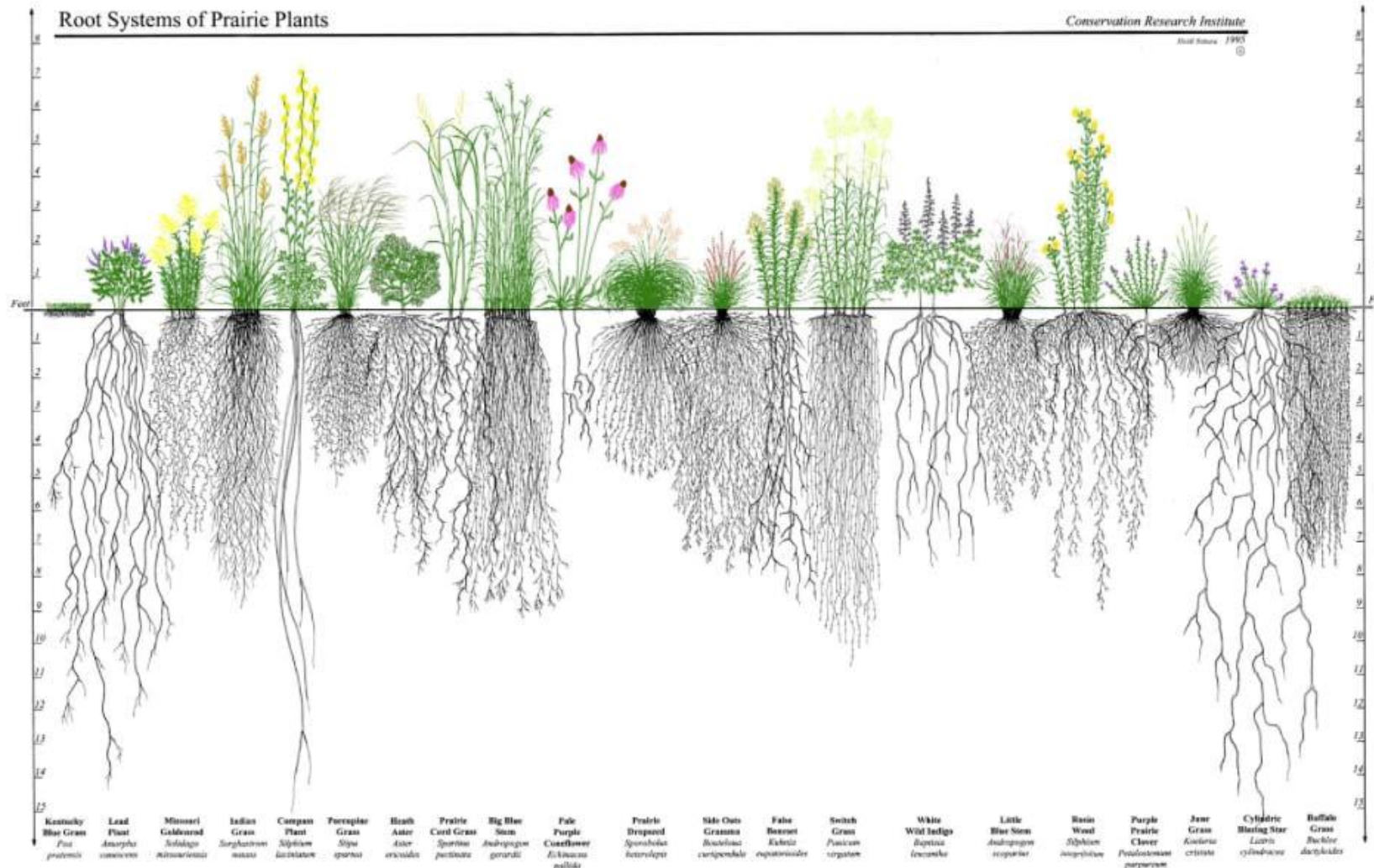




# Vegetation







# Plant-Based Features



Figure 5



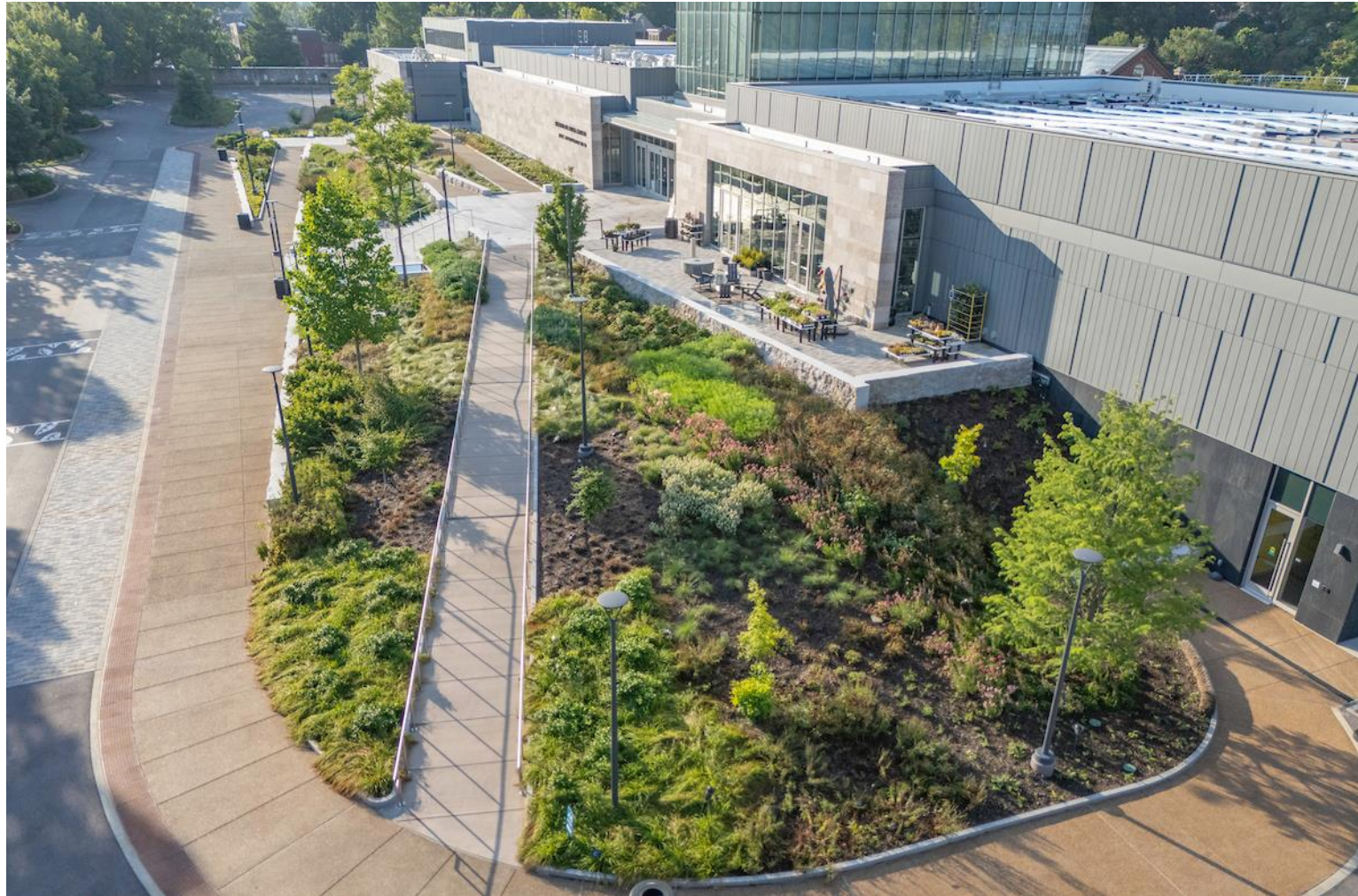
Figure 6

# Kemper Center for Home Gardening: Rain Garden





# Kemper Center for Home Gardening: Rain Garden



# North Plantings







# South Plantings







# Parking Lot: Bioswales / Bioretention







**Lucy and Stanley Lopata Prairie Garden**







# Lucy and Stanley Lopata Prairie Garden







# Shaw Nature Reserve







# Shaw Nature Reserve







**Proof of  
Green Roof!**

# Shaw Nature Reserve







# Sophia M. Sachs Butterfly House







# Sophia M. Sachs Butterfly House





# Public Engagement

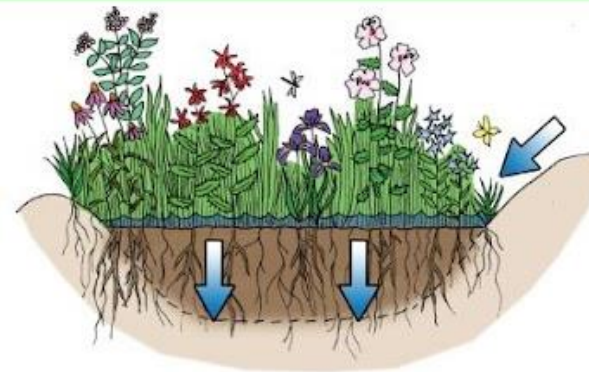






## THIS IS AN MSD RAINSCAPING SMALL GRANTS PROGRAM PROJECT

*Capturing rain where it falls*



[www.msdproujectclear.org/what-we-do/rainscaping/small-grants/](http://www.msdproujectclear.org/what-we-do/rainscaping/small-grants/)

# Signage





 MISSOURI BOTANICAL GARDEN



Deer Creek Watershed Alliance

a project of  MISSOURI BOTANICAL GARDEN

# Rainscaping Grants





**SAVE THE DATE:  
FALL SALON**

NOVEMBER 6, 2024  
2:00-5:00 PM



**Seeded Landscape Tour at Bellerive Park**

Tickets are \$40 and include refreshments.

Stay tuned  
for more  
information  
and ticket  
sales!

Contact us:

[shawseries@mobot.org](mailto:shawseries@mobot.org)  
[tinyurl.com/MGBShawSeries](https://tinyurl.com/MGBShawSeries)



# Shaw Series





ACCESSIBILITY AND UNIVERSAL DESIGN

BIOPHILIC DESIGN

SUSTAINABLE ENERGY

TRANSPORTATION

WATER CONSERVATION AND NEW PLANTINGS

**LEED Certification**

# Jack C. Taylor Visitor Center





**Accessibility**



ACCESSIBILITY AND UNIVERSAL DESIGN



BIOPHILIC DESIGN



SUSTAINABLE ENERGY



TRANSPORTATION

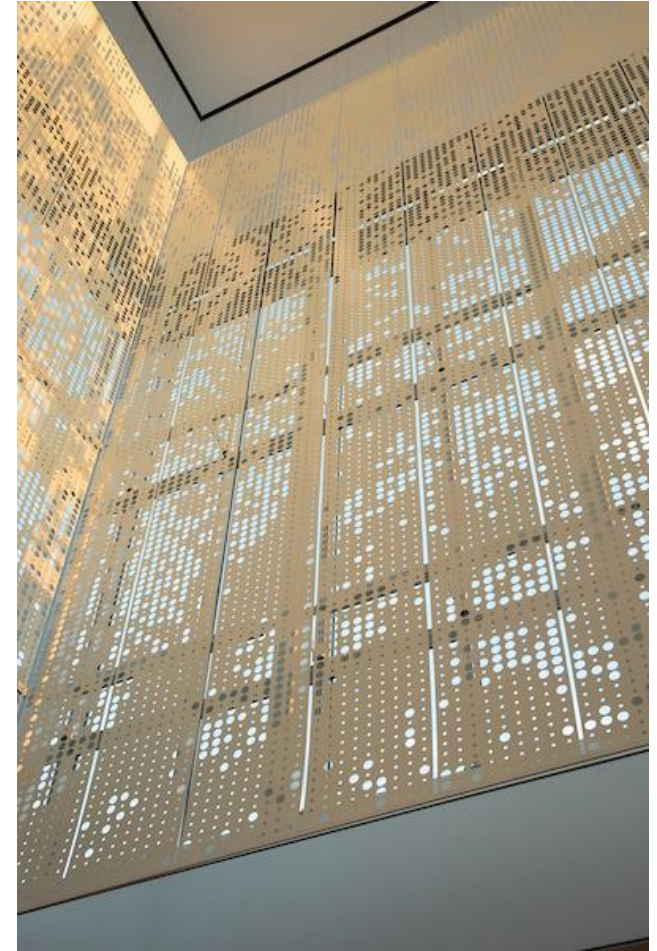


WATER CONSERVATION AND NEW PLANTINGS



# Jack C. Taylor Visitor Center





# Biophilic Design



ACCESSIBILITY AND UNIVERSAL DESIGN



BIOPHILIC DESIGN



SUSTAINABLE ENERGY



TRANSPORTATION



WATER CONSERVATION AND NEW PLANTINGS



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# Rooftop Solar Array





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# Transportation





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# Water Conservation and Plantings

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*Certified Gold!*





**Thank you!**