

# Greening Business In St. Louis



**Jean Ponzi – Green Resources Manager**  
**EarthWays Center of Missouri Botanical Garden**  
*Resource Advisor to the St. Louis Green Business Challenge*



# *Inaugural Class - 2010*

3Degrees/St. Louis Earth Day

Ameren

Arcturis

AT&T

Bethesda Health Group

Boeing

Brown Shoe Company

Bryan Cave

Burns & McDonnell

Bunge North America

Cassidy Turley

Christner

Color Art Integrated Interiors

Commerce Bank

Deloitte

EDC of St Charles County

East-West Gateway Council

Emmis Communications

Express Scripts

Farnsworth Group

Federal Reserve Bank of St. Louis

Focus St. Louis

Gallop Johnson & Neuman

Geotechnology

Graybar Electric

HOK

The Hauser Group

Habitat for Humanity – St. Louis

IAMCP-St. Louis

Laclede Gas

Lewis and Clark Community College

Mackey Mitchell

Madison County Treasurer's Office

Maritz

Markwort Sporting Goods Company

McKendree University

Metro

Microsoft Certified Partners Assn.

Millipore

Missouri Botanical Garden

Moonrise Hotel

Partnership for Downtown St. Louis

SCI Engineering

SWT Design

St. Louis Cardinals

St. Louis Community College

St. Louis County Economic Council

St. Louis RCGA

St. Louis University

Southwestern Illinois College

Special School District of St. Louis County

Stan Gellman Graphic Design

Tarlton

Tower Grove Park

UMB Bank

The Vandiver Group

Walsh & Associates

Wells Fargo Advisors



# The Right Tool for the Job!



## St. Louis Green Business Challenge Scorecard



Company Name:	
Site Location:	
Number of Employees At Site Location (Full-time, part-time, contract, etc):	
Building Owner or Tenant?	
Square Feet of Office Space at Site Location:	
Green Business Challenge Contact:	
Baseline Score (due March 15, 2010)	0
Final Score (due October 15, 2010)	

Question Number	Outreach	Question	Answer (yes/no)	Points Achieved	Points Available	How did you achieve this strategy? Please provide a short description of the action taken.
O1.1	Green Team Functions	<b>Green Team Organization:</b> Does your company have a "Green Team," which is responsible for managing sustainability initiatives at this site (1pt)? Do you have a dedicated staff person whose written job duties include responsibility for sustainability initiatives in your business (1pt)? Does your Green Team meet at least quarterly (1pt)?			3	
O1.2		<b>Certified Staff:</b> Does your company have a BOC or LEED-AP accredited person on staff or contract to assist with sustainability?			1	
O1.3		<b>Level of Commitment:</b> Has your company's CEO provided written support for the company sustainability efforts (1pt)? Do you have dedicated budget resources to support sustainability efforts (1pt)?			2	
O1.4		<b>Educational Sessions:</b> Does your company's Green Team hold educational sessions for all company employees?			1	
O2.1	Internal Communication	<b>Sustainability Guidelines:</b> Has your Green Team written a set of sustainability guidelines for the company and distributed it to all employees or made it accessible on the company's internal website?			2	
O2.2		<b>Progress Reports:</b> Do you have ongoing measurement of your sustainability strategies and alert all staff with electronic reports on the progress of in-house environmental initiatives?			2	
O2.3		<b>Recognition:</b> Does your company recognize your sustainability accomplishments at least once a year?			1	
O3.1	External Outreach	<b>Corporate Policy:</b> Have you posted your company's approved Sustainability policy, message and strategy on your website?			2	

# Triple Bottom Line of Sustainability



***Making Green Work In Business Terms***



MISSOURI BOTANICAL GARDEN

**Capital Resources**

**Human Resources**



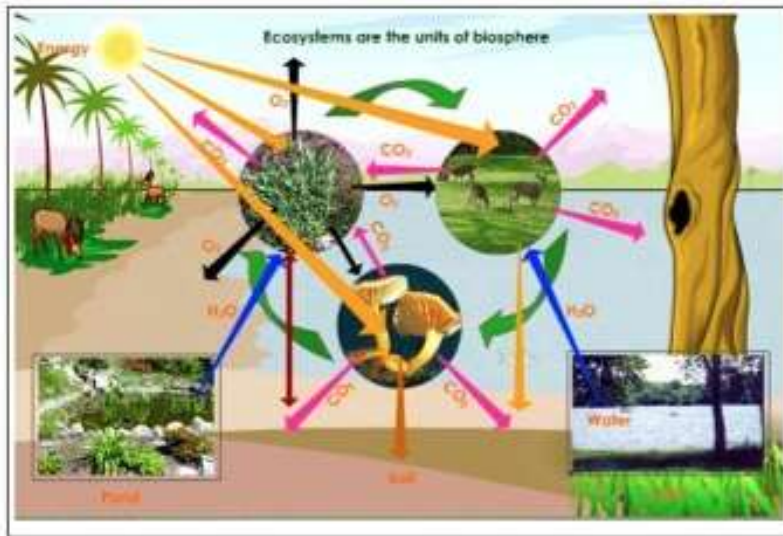
**Natural Resources**

Core Principles can be Adapted to Fit  
Diverse Company Cultures



# *Cultivating Sustainability as a Literacy*

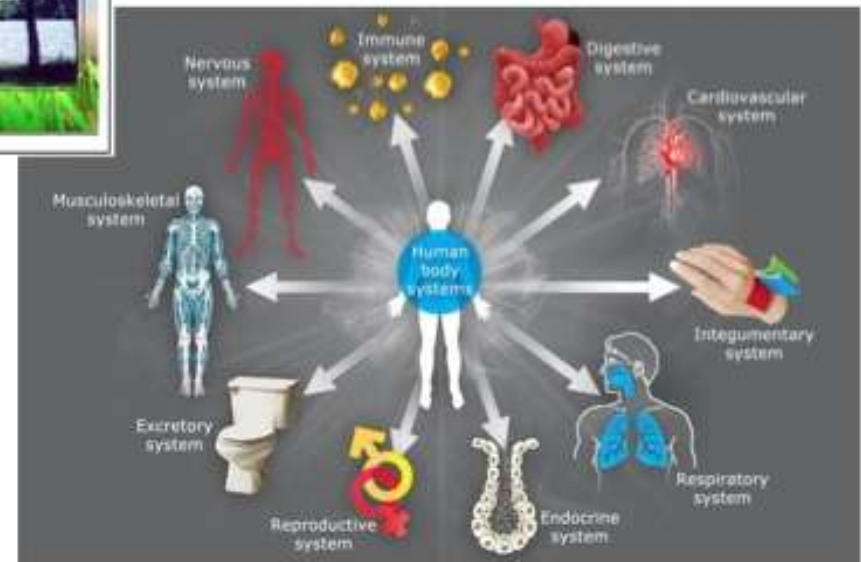
## Green Makes Connections



ecosystems



human body  
systems



# SUSTAINABILITY

## Sustainability

Meeting the needs of the current generation  
without compromising the ability of future  
generations to meet their own needs.



***Why Do Businesses Care About This Green Stuff Now?***

# Class of 2011

The Advertisers Printing Company	Express Scripts, Inc.	Novus International
Alberici	Federal Reserve Bank of St. Louis	Partnership for Downtown St. Louis
Ameren	Geotechnology, Inc.	SCI Engineering, Inc.
American Lung Association	Global Products, Inc.	SWT Design
America's Central Port	Graybar	Saint Louis Zoo
Arcturis	HOK	Saint Louis University
Armstrong Teasdale LLP	Habitat for Humanity St. Louis	Save-A-Lot Food Stores
The Boeing Company St. Louis	Holland Construction Services, Inc.	Schnuck Markets Inc
Brown Shoe Company	Jacobs	Sigma-Aldrich
Bryan Cave LLP	Jones Lang LaSalle	Southwestern Illinois College
Burns & McDonnell	KPMG	Special School District of St. Louis County
Cannon Design	Laclede Gas Company	St. Louis Cardinals
Christner	Mackey Mitchell Architects	St. Louis County
Citi	Maritz	St. Louis Office for Developmental Disability Resources
Clayco	Markwort Sporting Goods Company	St. Louis RCGA
Color Art Integrated Interiors	McCormack Baron Companies	Stan Gellman Graphic Design, Inc.
Commerce Bank	McKendree University	SustainEdge
Covidien	Metro	Tarlton Corporation
DRS Sustainment Systems, Inc.	Microgrid Energy	Thompson Coburn LLP
Datotel	Missouri Botanical Garden	UMB Bank
Deloitte	Missouri History Museum	The Vandiver Group
The Doe Run Company	Monsanto	Walsh & Associates
EDC of St. Charles Company	The Moonrise Hotel	Wells Fargo Advisors



# Zero Waste



# Waste = Food



# In Cycles We Trust





# We all live downstream





# Live Within Earth's Limits





# Diversify the sources that meet basic needs



# Beauty is Powerful

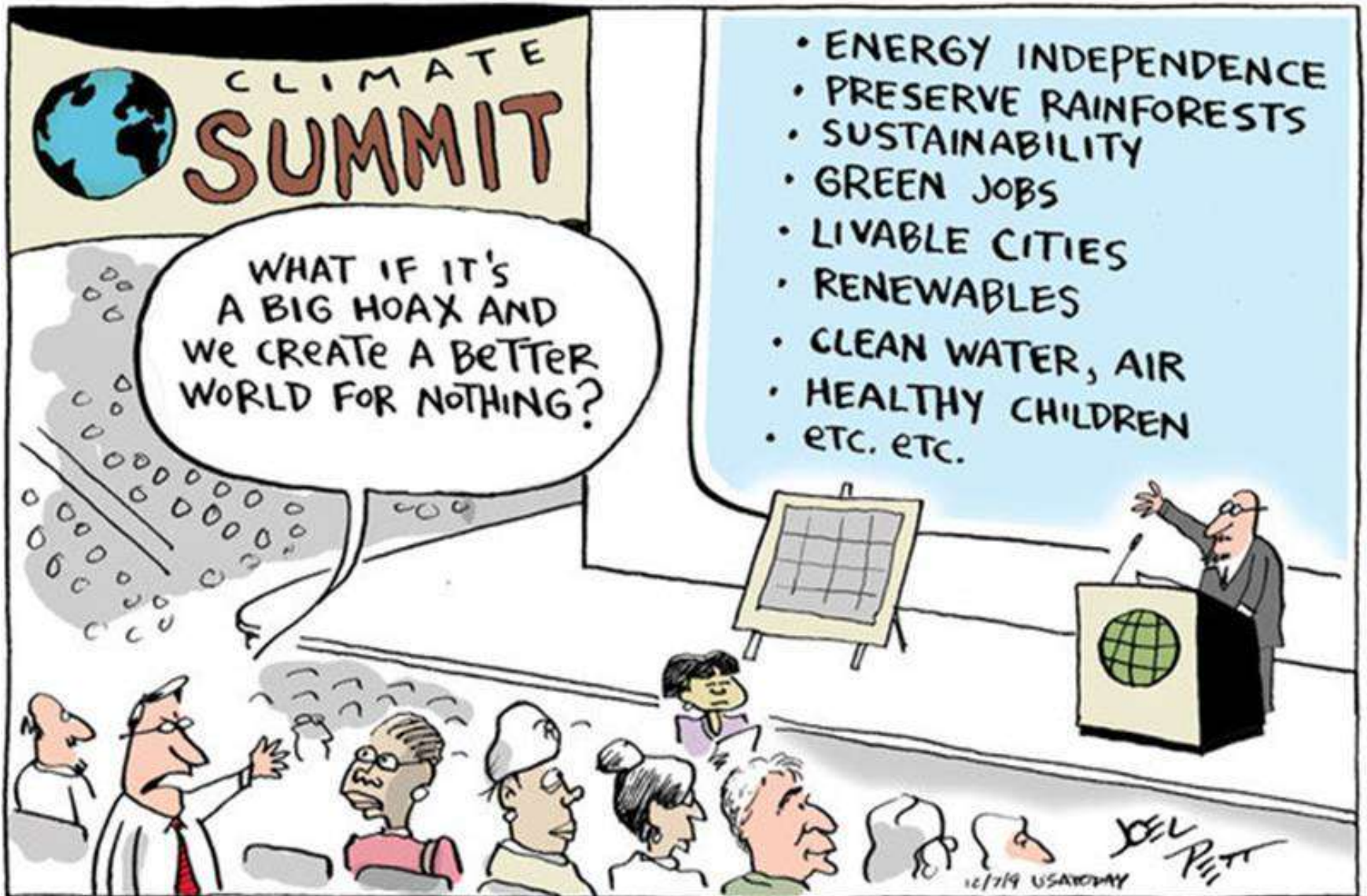


# Mother Nature Bats Last





# Take a cue from **Compost** and maintain a **Sense of Humus**





• 2011 •

AWARD OF  
**ACHIEVEMENT**

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ST. LOUIS

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• **GREEN BUSINESS** •  
CHALLENGE



- ✓ One Ream Less Campaign – paper use has decreased by approximately 10.5 reams per person
- ✓ Chose 30% post consumer recycled paper as the Bank standard
- ✓ Calculated carbon footprint for the St. Louis office
- ✓ Initiated LEED certification for renovation effort



- ✓ Sustainable landscaping on campus
- ✓ Green Restaurant Certification for Extra Thyme employee cafeteria
- ✓ Single-stream recycling and composting reduced waste by 65%
- ✓ High-performance cleaning program with third-party certification
- ✓ Nationwide sustainability Wiki





# COVIDIEN

Hazelwood  
**GREEN**  
**TEAM** 

- ✓ Reduced solid waste to landfill by 12% and recycling increased by 18% through waste reduction programs
- ✓ Saved 26,400 MMBTU/year in natural gas by replacing boilers
- ✓ Found market for a waste by-product to become a raw production material
- ✓ Upgraded system to use waste heat from new heat recovery chiller



# EDC of St. Charles County



- ✓ Established sustainability guidelines for tenants
- ✓ Surveyed tenants on thermal comfort to appropriately adjust heating and cooling system
- ✓ Provides conference calls and video webinars for clients to reduce emissions from car travel
- ✓ Organized Cowbell Marathon to improve health and wellness of St. Charles community



# Markwort Sporting Goods Company

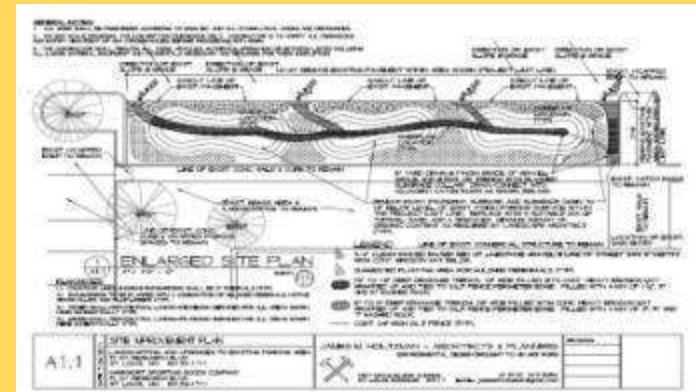


- ✓ Redesigned product packaging to reduce plastic and materials
- ✓ Sustainability Officer visually communicated Challenge progress
- ✓ Implemented single-stream recycling
- ✓ Purchased BPA-free canteens for all employees
- ✓ Added transit benefit for employees
- ✓ Switched to e-mailed invoices



# Markwort Sporting Goods Company

- ✓ Designed and received permit for a depaving rain garden project and will remove 15 parking spaces for rain garden
- ✓ Interior lighting audit and upgrade of fixtures
- ✓ Enrolled in Energy Star Program
- ✓ Hosting Holiday Lights recycling bins for St. Louis Green.com - Operation Food Search drive





THE PARTNERSHIP *for*  
DOWNTOWN ST. LOUIS



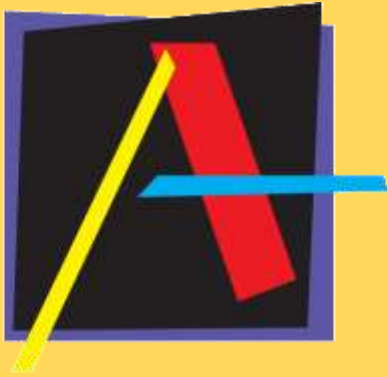
- ✓ Opened Downtown Bicycle Station in collaboration with more than 15 companies and organizations
- ✓ Recycling at Old Post Office events
- ✓ Tours downtown guests in WeCars
- ✓ Participant in first downtown building-wide composting collection





- ✓ Launched St. Louis County SAVES™ Residential Energy Efficiency loan program
- ✓ Replaced boilers with new high efficiency equipment
- ✓ Implemented single stream recycling throughout County building – achieving 28% waste reduction





The Advertisers Printing Company, Inc.



- ✓ Developed Sustainability Management System
- ✓ Reduced waste to landfill by 80% with aggressive recycling program
- ✓ Certified Sustainable Green Printers
- ✓ “Know Before You Throw” Program picks up clients’ old printed or recyclable materials
- ✓ Donates unusable sizes of blank stock to local schools

# ARCTURIS

together we create

- ✓ Collaborated with fellow tenants on composting program
- ✓ Promoted National Park(ing) Day with Trailnet to take back streets for pedestrians and bikes
- ✓ Redesign Challenge promotes sustainable do-it-yourself design
- ✓ Donated old product samples to Edgewood Children's Art program







- ✓ Hydrogen fueled Phantom Eye assembled in St. Louis
- ✓ Recycling sealant tubes and using excess sealant for cement kiln fuel
- ✓ ENERGY STAR Partner of the Year
- ✓ Closed-loop system to cool pump bearings saves 13.9 million gallons of water a year





## Brown Shoe Company

- ✓ Participated in EPA Climate Leaders
- ✓ Educates associates on sustainability policies through intranet and newsletter
- ✓ Naya Shoes made from recycled and renewable materials
- ✓ Plant-A-Tree campaign with Nordstroms and Naya Shoes and Souls4Soles shoe recycling program



## Habitat for Humanity St. Louis

- ✓ Shares best practices on LEED home construction with other Habitat chapters
- ✓ ReStore partners with the St. Patrick Center to provide green jobs training to Go Green! Recycling Interns
- ✓ Placed standardized recycling bins throughout facility and trained all staff





- ✓ Native Habitat Restoration on Riverfront Trail
- ✓ Monthly Eco-Challenges to engage employees
- ✓ Greening workstations with plants to improve indoor air quality
- ✓ Adopted St. Louis office sustainability guidelines
- ✓ Promotes transit, ridesharing and maintains company-specific WeCar







JONES LANG  
LASALLE®

- ✓ ENERGY STAR-certified building
- ✓ Launched tenants Green Team
- ✓ Started composting pilot project for tenants
- ✓ Toner and Battery recycling kiosks
- ✓ Electronic recycling drives



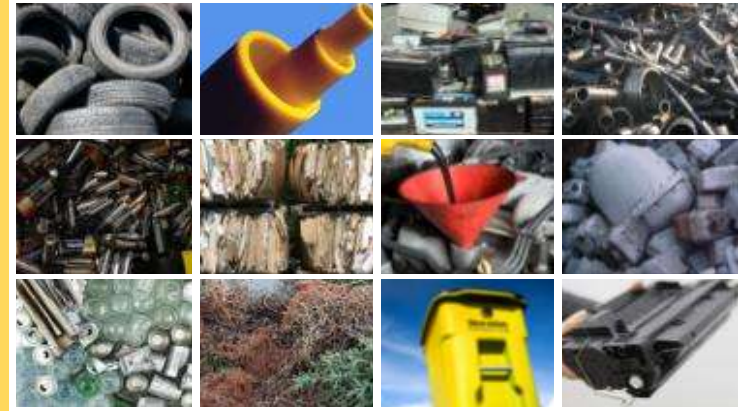


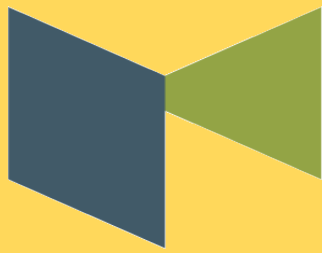
- ✓ Installed 100kW Solar panels
- ✓ Constructed the Energy Learning Center, to teach information on renewable energy resources, energy efficiency-options and environmental upgrades across the Ameren system
- ✓ Added 3 electric vehicles (Chevrolet Volts) to fleet and 9 charging stations



# Laclede Gas

- ✓ Extended Green Challenge activities to district facilities
- ✓ Implemented multiple materials recycling program
- ✓ LEED –CI process for new conference center
- ✓ Sustainability education on Laclede TV
- ✓ Building wide composting partner





# MACKEY MITCHELL

## ARCHITECTS

- ✓ Electronic document policy reduced paper in office by 90%
- ✓ Doubled our recycling efforts to include batteries, light bulbs, and plastic bags
- ✓ Involving building management in company sustainability goals





- ✓ Hosted sustainability programs for community, SWAP-A-RAMA, Bike to Work refueling station
- ✓ 43% reduction in HVAC energy consumption
- ✓ Purchased new electric truck
- ✓ Annual Office Supply Swap between departments

Swap-O-Rama-Rama at the Missouri History Museum in Forest Park

Saturday **APRIL 10**  
Museum's Lower Level

Noon to 4 p.m.  
**FREE**

A graphic for the "SWAP-RAMA-RAMA" event. The text "SWAP-RAMA-RAMA" is written in large, colorful, block letters. To the left of the text is a pair of blue jeans. To the right is a red button. Below the text are several small icons: a red string, a needle, a button, a white shirt, and a brown jacket. To the right of the graphic is a photograph of people at a table with various items on it.

Swap-O-Rama-Rama is back! Everything old is new again at the ultimate community clothing swap and of do-it-yourself clothing recycling workshop! Here's how it works:

Step 1: Bring at least one bag of your unwanted (but clean!) clothes to contribute to the "store" (no undergarments please!).

Step 2: Dive in and find the treasures you would like to keep.

Step 3: Take your clothes home, OR...

Step 4: Slide over to our "Creation Station" where volunteers with sewing machines will help you modify or transform your finds.

Throughout the day, you will also have the opportunity to whet your creative appetite at special demonstrations, including how to make a quilt out of your old t-shirts.

Sewing notions will be provided. A silk screening machine will be provided by Yuda ([www.whatsyoudo.com](http://www.whatsyoudo.com)). Leftover clothing will be sent to Remains Clothing Recycling. Volunteer and promotional support provided by the St. Louis Craft Mafia and the Missouri Botanical Garden's EarthWays Center.

Swap-O-Rama-Rama is an international network of events created by Wendy Tremayne and protected under a Creative Commons License. For more information, visit [www.swaporamarama.org](http://www.swaporamarama.org).

MISSOURI HISTORY MUSEUM  
Lindell & DeBaliviere in Forest Park  
(314) 746-4599 • [www.mohistory.org](http://www.mohistory.org)

The logo for the Missouri History Museum, featuring the words "Missouri History Museum" in a blue, sans-serif font, with a blue wavy line underneath.

# MONSANTO



- ✓ Active partner in the EPA WasteWise Program
- ✓ Overall landfill diversion rate of 70%
- ✓ Waste-to-Energy initiative diverts nearly 250,000 pounds of laboratory waste
- ✓ Rebalanced laboratory ventilation rates to reduce energy use by 33% in HVAC



# The Moonrise Hotel

- ✓ Installed 5kW Solar Awning on Rooftop Bar
- ✓ Electric vehicle charging stations for guests and public
- ✓ Global Soap Project to recycle unused soap
- ✓ Reduced food waste program through donations to Operation Food Search and composting



# NOVUS<sup>®</sup>

INTERNATIONAL, INC.

- ✓ Participants in Sustainable SITES initiative
- ✓ Awarded Level B rating by Global Reporting Initiative
- ✓ Installed wind spire to offset energy used for landscaping
- ✓ Electric charging stations
- ✓ On campus bee hives yield 65 pounds of honey





# Saint Louis University

- ✓ Received Bronze Award at the Association for the Advancement of Sustainability in Higher Education (AASHE)
- ✓ Assisted City of St. Louis participation in ICLEI Star Index
- ✓ LED technology reduced energy by 87% in student center
- ✓ Participated in “Recyclemania with Higher Education Sustainability Consortium



SAINT LOUIS  
UNIVERSITY



- ✓ New bio-diesel system reuses old fryer oil
- ✓ Installed high-efficiency on-demand water heaters
- ✓ Pursuing LEED certification
- ✓ Lighting efficiency upgrades throughout zoo buildings
- ✓ Sharing sustainability initiatives with other zoos





- ✓ Cardboard recycling at all corporate stores
- ✓ Soft plastic recycling pilot program
- ✓ E-waste recycling for employees
- ✓ ZERO WASTE pilot program at one St. Louis store



# SIGMA-ALDRICH™

- ✓ Planning installation of 50kW solar array
- ✓ Participates in Carbon Disclosure Project – 70<sup>th</sup> percentile in carbon reduction
- ✓ Pilot phase of Green Chemistry Grading matrix
- ✓ Integrated social and environmental responsibility into corporate standards





# Special School District of St. Louis County

- ✓ Recycling campaign reduced waste by more than 25%
- ✓ Decoration for office parties from recycled materials
- ✓ Photovoltaic energy used at school
- ✓ Recycling and sustainability incorporated into curriculum



# St. Louis Cardinals

- ✓ Recycling rate of 29% avoided 520 tons of waste to landfill
- ✓ No-Idling Policy around stadium
- ✓ Participates in EPA WaterWise and ENERGY STAR Partnership
- ✓ Member of Green Sports Alliance and challenging other stadium managers on energy and trash reductions





**WALSH & ASSOCIATES, INC.**



- ✓ 85% of electrical usage provided by 100kW solar array
- ✓ Installed energy monitoring and energy efficient power strips at work stations in the office
- ✓ Utilization of the EPA Energy Star Portfolio Manager with a score of 96
- ✓ “Hero of the Planet” award winner in sustainable business operations





- ✓ “Kick the Can” campaign eliminated individual trash bins for recycling
- ✓ Assisted Jones Lang LaSalle in implementing building-wide composting
- ✓ Created “Eat Green” catering policies and local vendor list
- ✓ Implemented Sustainable Operations Plan





- ✓ Metal recycling donated 150 tons to Operation Food Search
- ✓ Partnered with local farmers to grow soybeans and pumpkins on undeveloped campus property
- ✓ Blue Jean recycling campaign
- ✓ Landscaped water retention area into wetlands
- ✓ Fall walking tour – lunch and learn for employees

WELLS  
FARGO

ADVISORS

- ✓ Enrolled customers in eDoc to reduce paper statements
- ✓ Recycled 24 cubic feet of styrofoam per week
- ✓ Annual Green Fair with 2,000 employee attendees and 52 vendors
- ✓ Partnered with City of St. Louis for ICLEI Star Index
- ✓ Environmental Forum blog shows where to purchase green products and services



# CHRISTNER

- ✓ Moved into new LEED-Gold designed office space
- ✓ Dual monitors for employees to reduce office paper consumption
- ✓ Installed new high-efficiency lighting and low-flow toilets
- ✓ Donated old office furniture to Operation Food Search



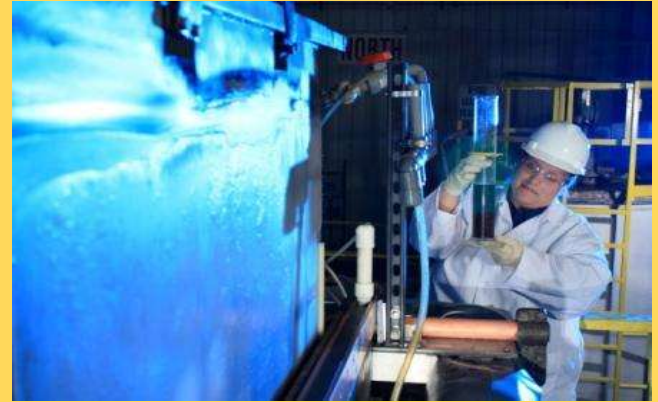


- ✓ Partnered with OfficeMax to deliver office supplies in reusable totes
- ✓ Implemented electronic certified mailing processes
- ✓ Created electronic documents and links for employees to reduce paper usage
- ✓ Increased video conferencing, conference calling and on-line communication to decrease travel





# THE **DOE RUN** COMPANY



- ✓ Battery recycling facility recovers up to 160,000 tons of refined lead and lead alloys from more than 13.5 million recycled lead-acid batteries annually
- ✓ Recycled shoes with Shoeman Water Project
- ✓ Implemented single stream recycling
- ✓ Reduced paper usage by 30%



- ✓ Installed 25 kW solar array on headquarters building to offset our electrical energy costs
- ✓ Installed large ventilation fans to better circulate heated air
- ✓ Induction lighting reduces energy use by 50%
- ✓ Heat maintenance facility with excess vehicle waste oil
- ✓ Truck Tracker software improves fuel efficiency



- ✓ Created Citi Supply Room to recycle office supplies
- ✓ Excess supply drive/building clean-up resulted in nearly \$10,000 in recycling proceeds
- ✓ Piloted Single Stream Recycling; annualized impact – 200 tons
- ✓ Building became ENERGY STAR Certified



- ✓ Lighting renovation expected to reduce energy by 66%
- ✓ Changed 100% of textile screen printing inks to phthalate-free inks
- ✓ Sustainable Purchasing Policy created
- ✓ Cardboard packaging previously purchased in China now purchased in St Louis using FSC certified paper
- ✓ Recycling centers at each production work center



# Missouri Botanical Garden



- ✓ Office renovation complies with LEED-EBOM standards - certification in 2011
- ✓ Native plant landscaping expanded to west side of building
- ✓ Implemented single stream recycling
- ✓ 25kW photovoltaic solar array will provide 5% of electrical power needs





# MISSOURI BOTANICAL GARDEN

- ✓ Barrel vault skylight renovation upgraded to incorporate insulation
- ✓ Food waste composting implemented for all Garden catered events
- ✓ *Turn It Off Campaign* to engage employees in energy wise use of lighting, computers and other office equipment

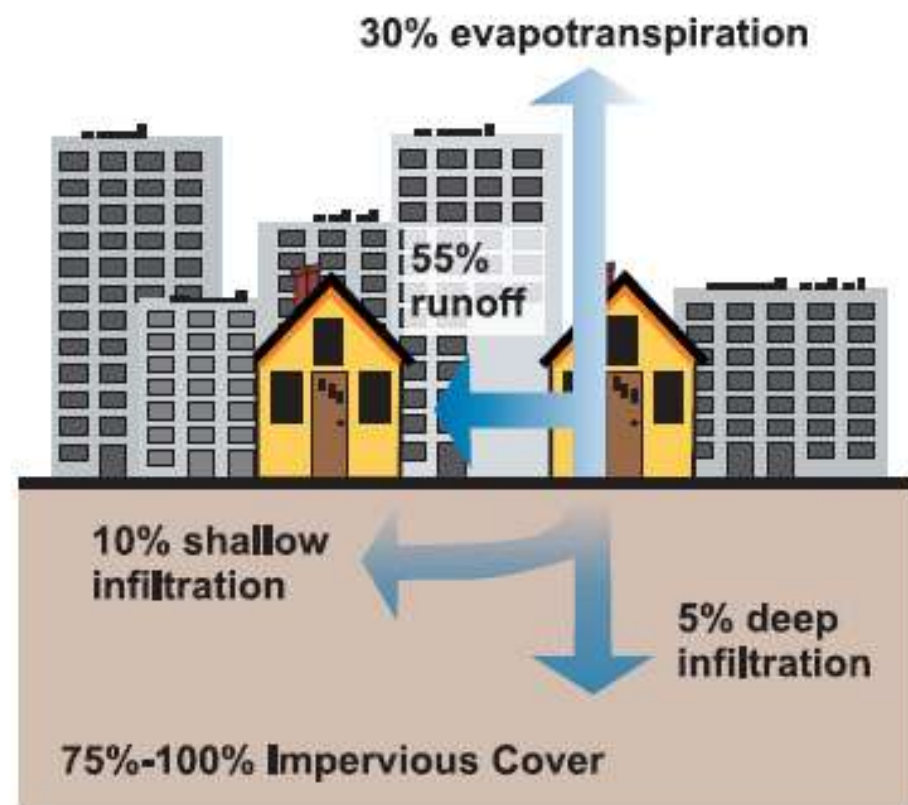
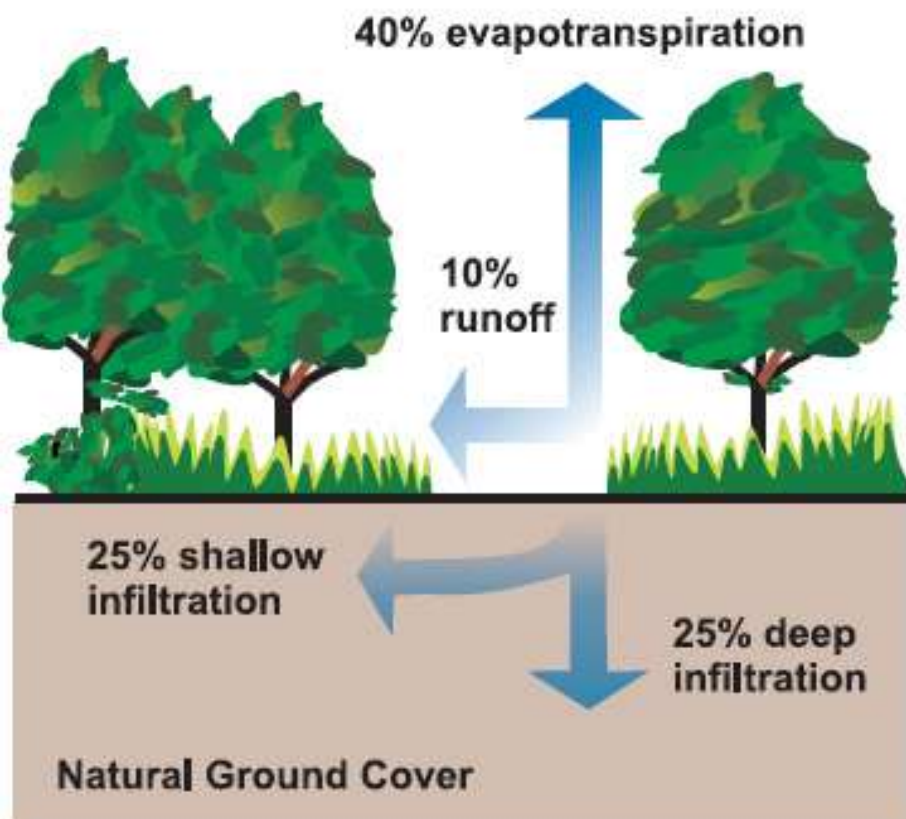




MISSOURI  
BOTANICAL  
GARDEN

## Greening the Garden's Parking Lots:

### The Problems with Paving





# Grasscrete







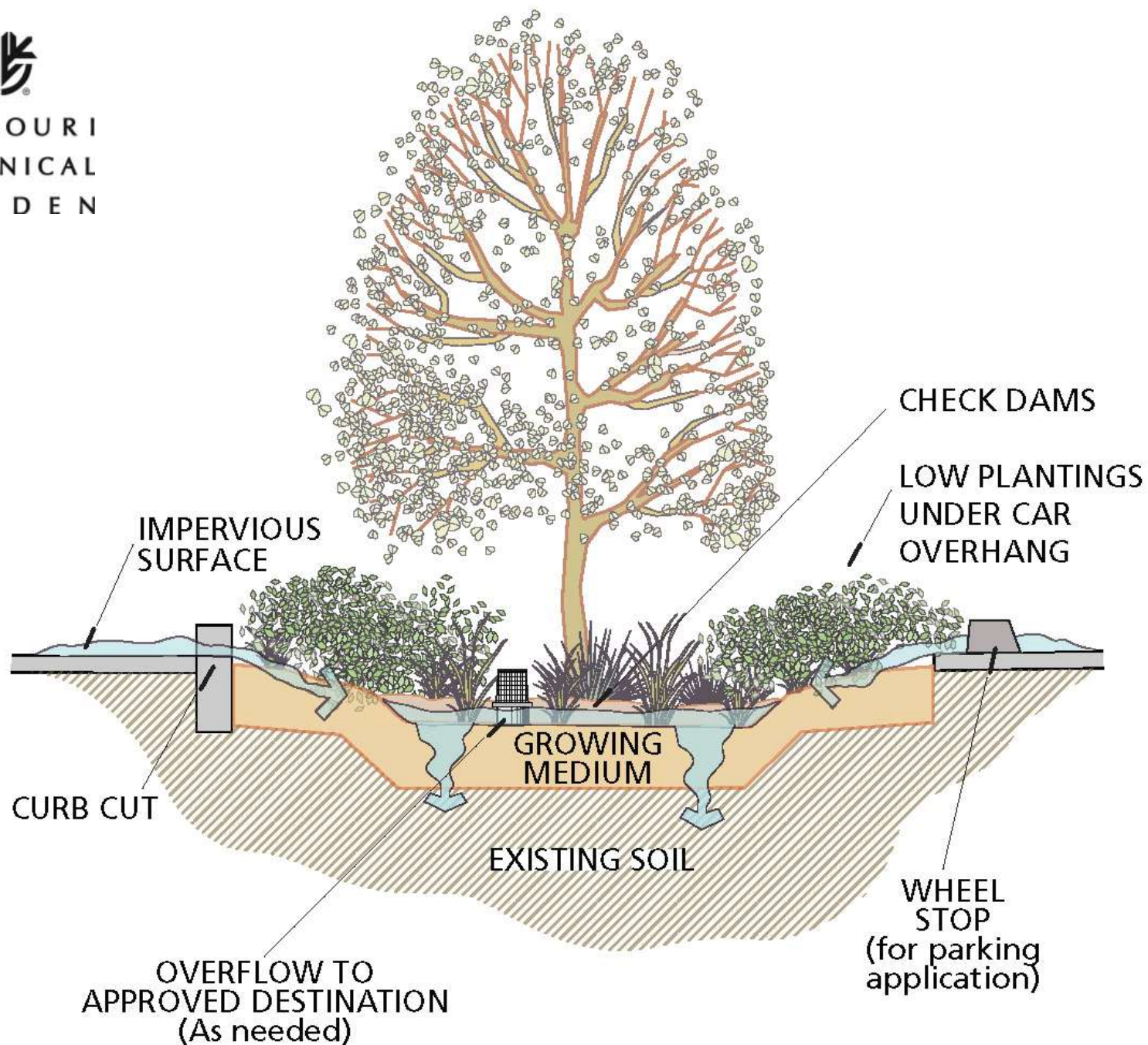
MISSOURI  
BOTANICAL  
GARDEN

East Lots  
Ridgway Parking Renovations  
Missouri Botanical Garden





MISSOURI  
BOTANICAL  
GARDEN





# Concrete solution

Pervious concrete, widely used in the South, is becoming increasingly popular in northern climates. Tests have shown that the porous concrete, if installed and maintained properly, can hold up under the freeze-thaw cycles experienced in Ohio.

## ▼ Conventional concrete

1. Strong, good for heavy truck traffic.
2. Smooth surface.
3. Deflects water.
4. Used on roads, parking lots, sidewalks and airport runways.



Gravel or crushed stone mixed with cement, water and sand.



Uses stone that is smaller than conventional concrete and cement with little or no sand in the mixture. This creates porous spaces that allow water to pass through.

## ▼ Pervious concrete

1. Not as strong as conventional concrete.
2. Rougher surface.
3. Water seeps through, reducing stormwater runoff.
4. Muffles noise and reduces hydroplaning.
5. Used primarily on parking lots, sidewalks and some roads.



Dense Concrete



Porous Concrete





- > 100,000 Visitors in 3.5 months
- > 90% Waste Diversion Rate



[missouribotanicalgarden.org](http://missouribotanicalgarden.org)





- ✓ Organizer of St. Louis Green Business Challenge
- ✓ Winner of 2011 Growing Green Award for Corporate Leadership
- ✓ Providing reusable silverware and glassware for meetings
- ✓ Composting of food and coffee waste after events





The St. Louis Regional Chamber and Growth Association

# St. Louis Green Business Challenge

## Class of 2011



**Earthworms** – KDHX-FM

Mondays 7-8 p.m.

[www.kdhx.org](http://www.kdhx.org)

**Growing Green St. Louis**

KTRS-AM

Sunday 1-2 p.m.

[www.ktrs.com](http://www.ktrs.com)

**Green Questions?**

**Missouri Botanical Garden's  
Green Resources Answer Service  
*is at your service***

[greenresources@mobot.org](mailto:greenresources@mobot.org) – 314-577-0246



MISSOURI BOTANICAL GARDEN