

# Sustainability Studies

It's not just about going to college.

It's about changing the world.



**Mike Bryson, Sustainability Studies**

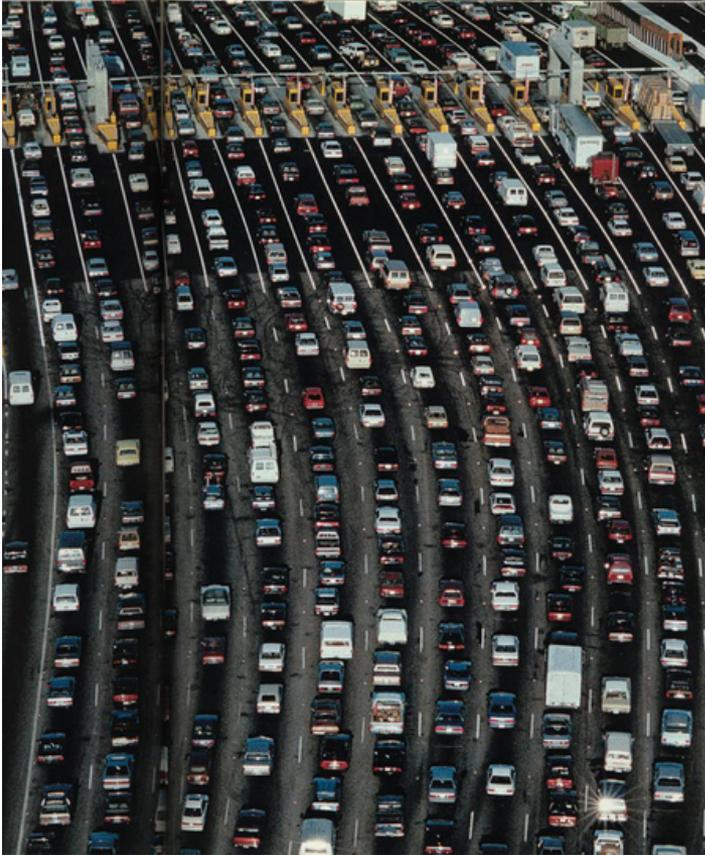
Wheeling High School AVID Program Lecture

18 May 2012



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# Sustainability Defined



**This is not sustainable . . .**



**. . . but this is.**

# Sustainability Defined



**Not so good.**



**Ah, much better.**

# Sustainability Defined



**Nope.**



**Yep.**



The green roof of Chicago's City Hall  
(source: City of Chicago)

## In a Sustainable Future:

**Environmental resources** are conserved for both future human generations as well as non-human biota.

**Economic development** occurs not at the expense of the natural environment, but in a way to mitigate ecological costs and impacts.

**Equity** – social, economic, and environmental justice – governs the process of sustainable development.

*Discussion: What is your school or community doing on the sustainability front?*

# The Chicago River



## **Science, Nature, and a Sense of Place**

Understanding the river as a modified natural ecosystem (natural sciences)

Developing policies regarding water quality, river use, sewage treatment  
(social and natural sciences)

Representing the river as a cultural resource (humanities)

Restoring the river: water quality, biodiversity, riparian zone vegetation,  
citizen access and recreation (all disciplines)

# Canoeing the North Branch



RU students and Friends of the Chicago River head south into the Loop where the branches meet; Wolf Point is in the background (October 2011)



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# Canoeing the South Branch



The mouth of **Bubbly Creek**, an industrialized tributary of the South Branch of the Chicago River (May 2009)

# Learning about Wastewater



MWRD's **Racine Avenue Pumping Station**, Bubbly Creek, Chicago (May 2009)



Testing the water quality of the **Chicago River's North Branch** (May 2010)



Exploring the waters of the **Des Plaines River Wetlands Demonstration Project** (October 2010)

# Urban Farming



Growing Power's **Iron Street Farm** in Bridgeport, Chicago (April 2012)



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# Urban Farming



Brian Ellis, an **urban farmer** at Growing Power (April 2012)

# Urban Farming



Compost crew at the Growing Power's **Chicago Lights Urban Farm** (May 2012)



Bending a pole for the new hoop house at **Chicago Lights Urban Farm** (May 2012)

# Urban Farming



Looking west through the symbolic arch at **Chicago Lights Urban Farm** (May 2012)

# The Green Economy

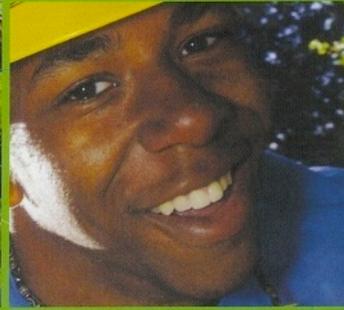
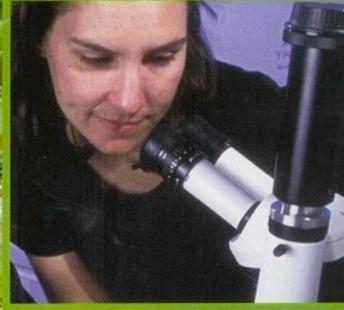
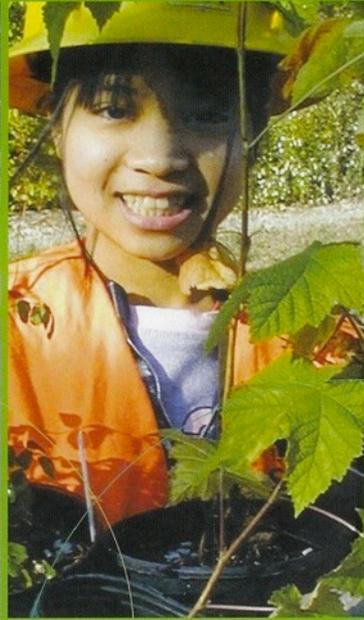
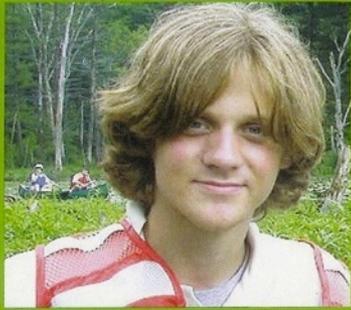
A study by the **Pew Charitable Trust** released in June 2009 said that there are already 770,000 "green" jobs in the economy (comparable to the 989,000 jobs in the more mature field of telecommunications) and that the nation's "clean-energy economy is poised for explosive growth."

A **US Conference of Mayors** report from October 2008 estimated that rapid growth in "green jobs" could make it "the fastest growing segment of the U.S. economy over the next several decades."

In July of 2011, the **Brookings Institute** released a landmark report entitled "Sizing the Clean Economy: A National and Regional Green Jobs Assessment" that rated the Chicago area third in green jobs among the 100 largest metro areas in the nation, with 79,388 jobs defined as green.

Just this May (2012), **Forbes Magazine** published its list of top US cities for current green job listings, and Chicago was ranked 7<sup>th</sup>.

*For more information/links on green jobs, see [this page on my faculty website](#).*



**I am** **green**  
environmental  
& conservation  
careers

### **Science/Engineering:**

- Energy manager/technician
- Hydrologist
- Restoration ecologist
- Toxicologist
- Water/wastewater engineer

### **Business/Professional:**

- Brownfields real estate developer
- Corporate recycling manager
- Environmental quality certification specialist
- GIS specialist
- Risk manager
- Sustainability officer

### **Social Science:**

- Geographer
- Museum curator
- Parks and recreation specialist
- Planner
- Policy analyst

### **Arts and Humanities:**

- Environmental communications
- Landscape architect
- Technical environmental writer

# Roosevelt University's New Wabash Building

32-story [multi-purpose building](#) located at 425 S. Wabash Ave. in Chicago on the site of the University's old Herman Crown Center. Contains classrooms, lecture halls, state-of-the-art science labs, conference space, a dining center, a student recreation center, residence suites for more than 600 students, and faculty/staff offices.

- Efficient vertical design: 2<sup>nd</sup> tallest academic building in the US
- Proximity to public transportation
- Green roofs on floors 5, 6, 16, 31, and 32
- Water and energy conservation features (low-flow fixtures, natural lighting, etc.)
- Recycling of construction waste; efficient recycling facilities within building
- Non-toxic building materials (fabrics, paints, etc.)



RU's Wabash Building, which will be Chicago's first LEED-certified skyscraper (dedicated May 2012)

# A Green Vision for RU's Suburban Campus

In progress at the Schaumburg Campus (opened 1996):

Sustainable landscape plan: native plants, prairie plots, walking paths, orchard, edible landscapes

Water conservation strategies: bioswales, cisterns, rain gardens, pervious paving

Outdoor education / recreation: experimental wetland restoration , native plant gardens, greenhouse, community garden / urban farm



RU's 24-acre suburban campus presents a golden opportunity for the university to put **green design principles** into practice as a model of sustainable landscape redevelopment. The campus is dominated by parking lots, but also has underutilized green space. A landscape plan developed by a campus sustainability committee and Bedrock Earthscapes has inspired us to replace turfgrass with native vegetation, manage the wetland/detention pond, and begin composting.

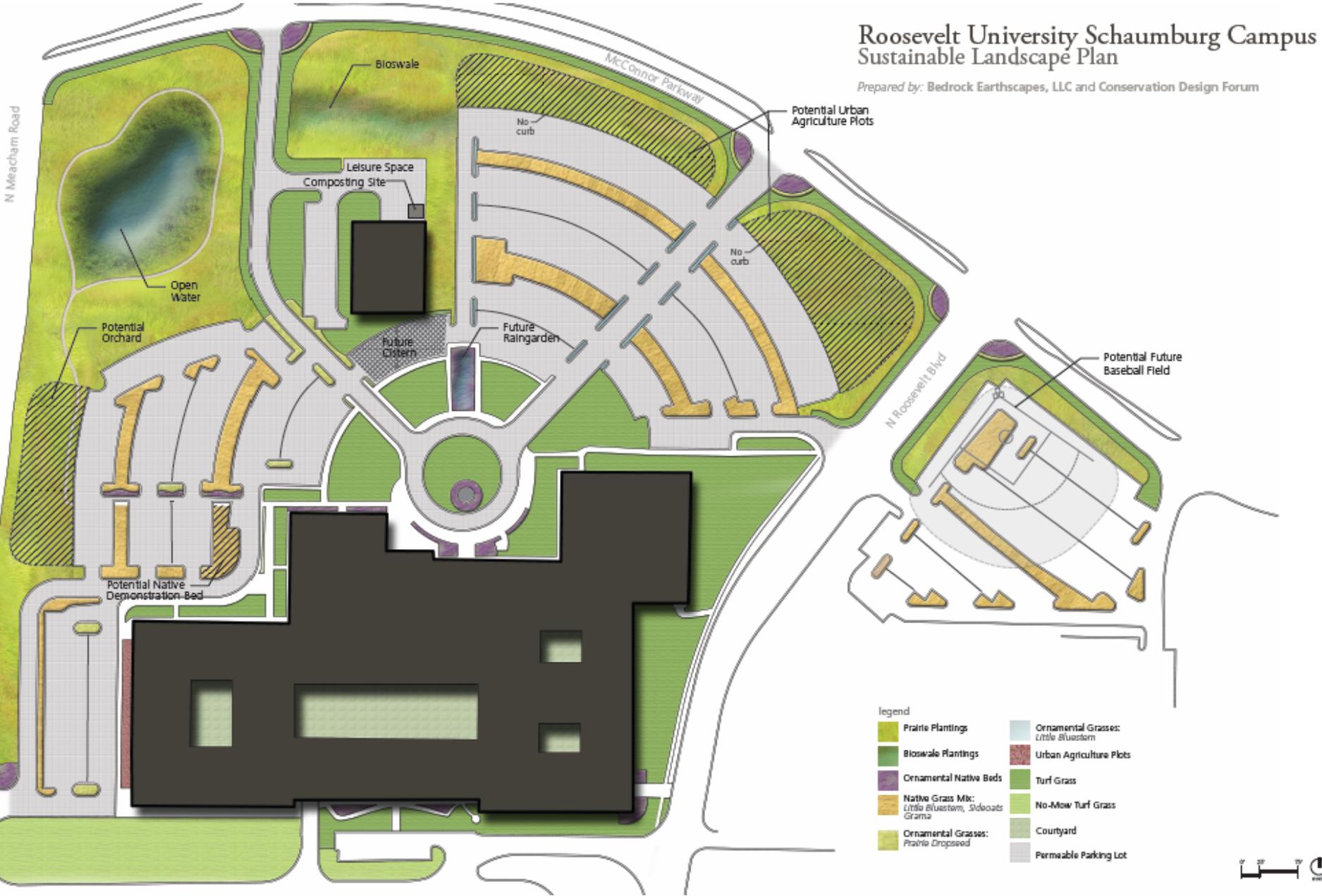
# Roosevelt University Schaumburg Campus Sustainable Landscape Plan

Prepared by: Bedrock Earthscapes, LLC and Conservation Design Forum

N Meacham Road

McConnor Parkway

N Roosevelt Blvd



Bioswale

Leisure Space  
Composting Site

Open Water

Potential Orchard

Future Cistern

Future Raingarden

Potential Urban Agriculture Plots

No-curb

No-curb

Potential Native Demonstration Bed

Potential Future Baseball Field

Legend

- Prairie Plantings
- Bioswale Plantings
- Ornamental Native Beds
- Native Grass Mix: Little Bluestem, Sideoats Grama
- Ornamental Grasses: Prairie Dropseed
- Ornamental Grasses: Little Bluestem
- Urban Agriculture Plots
- Turf Grass
- No-Mow Turf Grass
- Courtyard
- Permeable Parking Lot



# Landscape Restoration at Schaumburg Campus

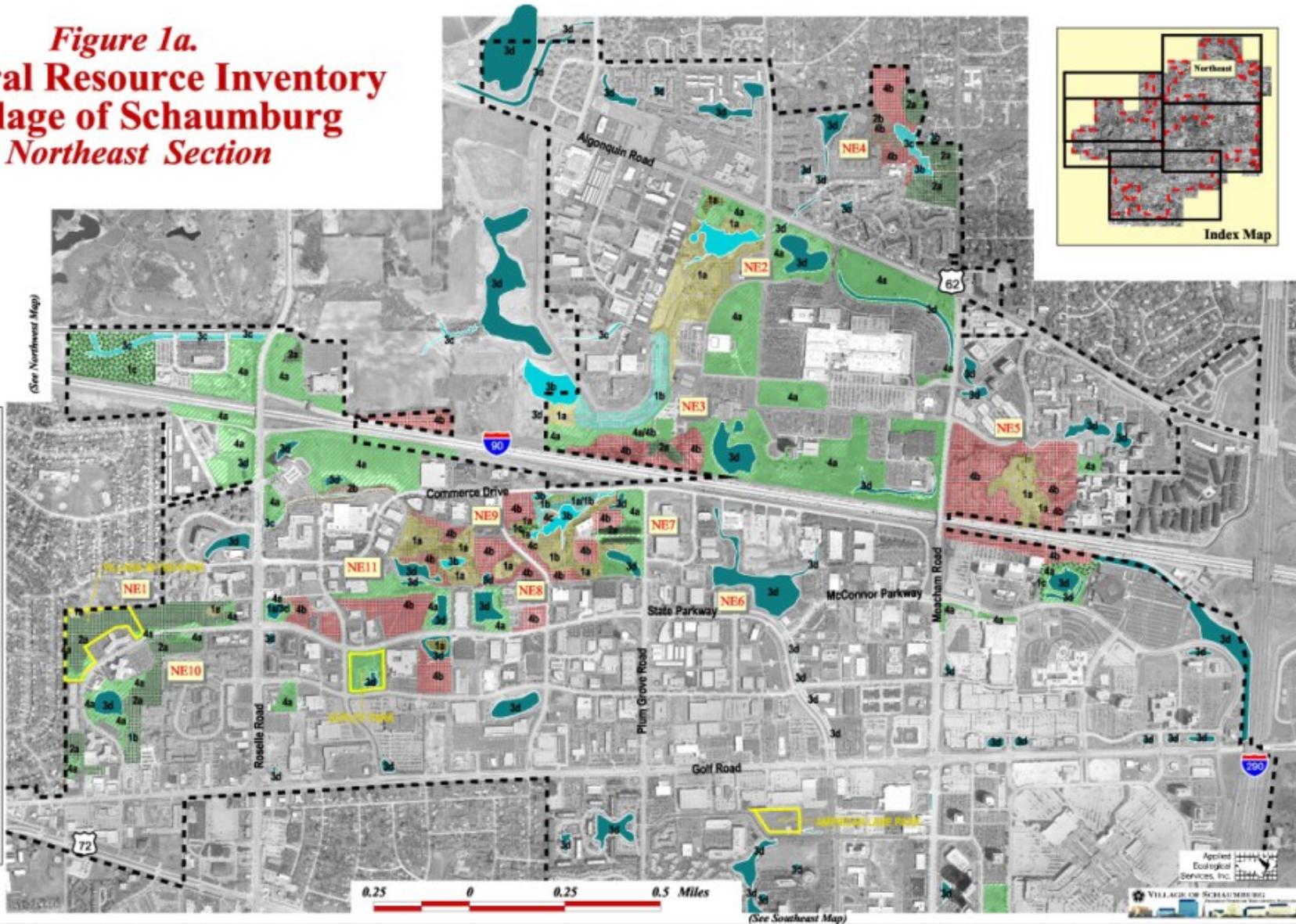


**Above:** The "old look" at Schaumburg Campus, where parking lots of turf grass (along with many native and non-native trees) dominate the grounds. Much of the grass has been replaced by prairie plantings in spring/summer of 2011. Over time, pavement will be replaced by pervious surface to allow water retention onsite.

**Right:** A prescribed burn of the wetland detention pond in spring 2011, the first ever on campus. This serves to discourage non-native woody species and encourage native wetland plants.



**Figure 1a.**  
**Natural Resource Inventory**  
**Village of Schaumburg**  
*Northeast Section*



Source: Schaumburg Biodiversity Plan (2004)



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# Thinking about College? Please do!



**Check out these RU Resources:**

**Sustainability Studies [Blog](#) and [Website](#)**

**[Prospective Student Info](#) (admission, financial aid, majors)**

**Prof. Mike Bryson's [website/blog](#)**