Wisconsin Green Building Alliance
CONNIE LINDHOLM, EXECUTIVE DIRECTOR

mission statement:

To facilitate and promote the development and use of ecologically sustainable materials and practices within Wisconsin's Built environment.

Celebrating 10 years!
Who We Are:

- General Contractors
- Architects
- Facility Managers
- Building Owners
- Interior Designers
- Developers
- Cleaning Companies
- Utilities
- Consultants
- Educators
- Engineers
- Realtors
- Urban Planners
- Landscape Architects
- Environmental Organizations
- Product Representatives

Green Building 101: The Why’s and How’s
Wisconsin Green Building Alliance
US GREEN BUILDING COUNCIL AFFILIATE
SINCE 2003
Green Building 101: The Why’s and How’s

an outline of today’s talk:

- What is Green Building? *why*
- Benefits of Green Building
- Examples *how*
- Does Green Building Pay?
- Short Recap
What is Green Building?

Design, construction and operating practices that create high quality, healthy living and working spaces in a manner that are both fiscally and environmentally responsible.

These practices address:

- Site issues
- Water efficiency
- Energy efficiency
- Conservation of materials and resources
- Healthy Indoor Environments
Benefits of Green Building

Why?

For the environment

For health & well-being

For your bottom line
U.S. Building Impacts:

- 12% Water Use
- 30% Greenhouse Gas Emissions
- 65% Waste Output
- 70% Electricity Consumption
Average Savings of Green Buildings

- **Energy Savings**: 30%
- **Carbon Savings**: 35%
- **Water Use Savings**: 30-50%
- **Waste Cost Savings**: 50-90%

Source: Capital E
Health gains from improved Indoor Air Quality
As indicated by reduced symptoms for flu, asthma, allergies, respiratory infections, headaches, and colds.
A $4 investment per square foot in building green nets a $58 benefit per square foot over 20 years.

- **$8.50** Operations & Maintenance Savings
- **$5.80** Energy Savings
- **$1.20** Emissions Savings
- **$0.50** Water Savings
- **$46.00** Estimated Health & Productivity Benefits

**Cost:** $4.00 PSF  
**Benefit:** $62.00 PSF
Increased Productivity.

- **Schools**: 20% better test performance
- ** Hospitals**: Earlier discharge
- **Factories**: Increased production
- **Retail**: Increase in sales per square foot
- **Offices**: 2-16% productivity increase
What is Green Building?

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Sustainable Sites

- Erosion and Sedimentation Control
- Age of Building
- Green Site and Building Exterior Management
- High Development Density Building and Area Alternative Transportation
- Reduced Site Disturbance
- Stormwater Management
- Heat Island Reduction
- Light Pollution Reduction

Schlitz Audubon Nature Center, Bayside, WI
POROUS CONCRETE

Captures stormwater and allows it to seep into the ground & recharges groundwater, reducing stormwater runoff.

In parking lots it creates more efficient land use by eliminating the need for retention ponds, swales, and other stormwater management devices.

Pervious concrete uses the same materials as conventional concrete, with the exceptions that the fine aggregate typically is eliminated entirely, and the size distribution (grading) of the coarse aggregate is kept narrow, allowing for relatively little particle packing.
GREEN ROOFS

- Extends life of roof
- Retains storm water
- Provides insulation
- Dampens sound
This Extensive Green Roof was installed 3 years ago at Christiansen Roofing Company in Milwaukee.

Photo taken after 4 months.
What is Green Building?

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Efficient Water Use

- Ultra Sense Faucet
- Waterless Urinal
- Dual Flush Toilet

Minimum Water Efficiency

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What is Green Building?

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We Energies, Energy for Tomorrow
for commercial and residential customers

100% purchased can reduce greenhouse gas emissions by 1,355 pounds per year

Total of all Energy for Tomorrow participants have reduced greenhouse gas emissions equal to the planting of 6,300 acres of trees or the output of 10,286 sports utility vehicles

More than 14,000 customers have partnered with us in producing electricity through clean renewable sources.

We Energies uses the Byron, WI Wind Turbines
What is Green Building?

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Columbia St. Mary's Expansion, Ozaukee County
M.A. Mortenson Construction

90.83% Recycling Rate
Uses for fly-ash in “Materials & Resources

Five Ways Concrete Helps Builds Green

1. Concrete creates sustainable sites.
2. Concrete enhances energy performance.
3. Concrete contains recycled materials.
4. Concrete is manufactured locally.
5. Concrete builds durable structures.
Library of Sustainability at the Urban Ecology Center

Provides information to the public on the importance of building green with sustainable healthy building products.
What is Green Building?

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HGA Office, Milwaukee, WI

Brengel Technology Center Milwaukee, WI
Does building green pay?

Only 5 – 10% of the total life cycle cost of owning and operating a building is design and construction.

The remaining 90% is operations and maintenance.

JohnsonDiversey LEED-EB Gold, Pilot Project 2004
Improved Bottom Line.

- 30-70% Energy Savings
- Enhanced Productivity
- Reduced Liability & Improved Risk Management
- Verified Performance
- Increased Value
**RECAP**

**Lower Construction Costs**
- Reduced site preparation and landscaping
- Lower waste disposal costs by 50 to 98 percent

**Reduced Operating Costs**
- Lower utility costs by 20 to 50 percent
- Reduced maintenance costs

**Higher Valuation of Building**
- Rule of Thumb: divide reduction in annual operating costs by 10 percent to get increased value of building.
- Up to $4 increased valuation for every $1 spent.
RECAP……..

More Productive Environment
- Better tenant and worker attraction/retention
- Less absenteeism by 45 percent
- Higher productivity up to 16 percent

Reduced Insurance and Risk of Liability
- Healthy occupants, greater occupant satisfaction
- Lower environmental impacts
- Streamlined regulatory approvals

Higher Visibility and Marketability
Other Useful Programs for Sustainable Buildings

Focus on Energy, www.focusonenergy.com
A state-wide public benefits program with resources for commercial buildings

WasteCap Wisconsin, www.wastecapwi.org
A non-profit organization specializing in helping businesses reduce the amount of waste going to landfills, while at the same time helping them to reduce costs.

Energy Center of Wisconsin, www.ecw.org
A private non-profit organization dedicated to improving energy sustainability including support of energy efficiency, renewable energy, and environmental protection.
For more information and to become a member

www.wgba.org