




Welcome to the eCourse on Green Building – Designing with Wood.

In this session, we will review the definitions of green building and their relationships to sustainable building materials. We will examine various green building rating systems and discuss their respective treatments of wood as a building material. The differences in those treatments will be reviewed and their ramifications will be further explored. Then we will examine internet sources for information on the subject of sustainable buildings. Finally, we will review the qualities which make wood a sustainable construction material, discuss the characteristics which make wood a green building material, and review how various rating schemes treat each of wood's characteristics.



Outline

- Little Known Forest Facts
- Measuring Green Buildings
- Green Rating System
- Sustainable Forestry Initiative
- Summary



This presentation addresses “green building” practices.

By the end of this eCourse, you will be able to:

- Define “green buildings”
- Explain why wood is a sustainable building material;
- Look at green building rating systems and their treatment of wood; and,
- Identify Internet sources for more information on the subject of sustainable building.

In this session, we will review the definitions of green building and its relationship to sustainable building materials. We will examine various green building rating systems and discuss their respective treatment of wood as a building material. The differences in that treatment will be reviewed and its ramifications will be further explored. Then we will examine internet sources for information on the subject of sustainable buildings. Finally, we will review the qualities which make wood a sustainable construction material, discuss the characteristics which make wood a green building material and review how various rating schemes treat each of wood's characteristics.



Are America's Forest in Danger?



- 1/3 or 747 x 10⁶ acres
- More trees than 1935
- 4 x 10⁶ planted daily
- Growth exceeds loss by 47%

Courtesy USFS



Q: Are America's forests in danger?

A: Not at all. Because the United States practices reforestation, its forests have actually grown in size over the past century. About one-third of the United States -- 747 million acres -- is covered with trees. In fact, we have more trees today than we had 70 years ago. And some 4 million more are planted each day. On the nation's commercial forests, net annual growth exceeds harvests and losses to insects and disease by an impressive 47 percent each year.

Q: Do timber companies replant when they cut?


A: Yes. Forest products companies are in the business of growing and harvesting trees, so reforestation is important to them. In fact, more than 91 percent of all trees planted in America during 1999 were planted by forest product companies and private timberland owners. And logging companies pay a special fee for replanting and reforestation when they buy the right to harvest timber on state or national forests.

In some regions of the country, nature itself replants very efficiently. Throughout the Northeast and Lake States for example, foresters often manage harvested areas to promote natural regrowth from sprouting and seeds.


Q: How many trees are planted each year?

A: In 1999, the forestry community planted some 1.7 billion trees in the United States. That's an average of more than 4 million new trees planted every day - more than 5 new trees a year for every man, woman and child in America.


PICTURE LINK http://forestry.about.com/cs/treeplanting/a/tree_plt_stats.htm



How Much Timberland?



- 504 x 10⁶ acres as commercial timber
- 29% government owned
- 58% privately held
- 13% by timber industry




Q: How much forestland is actually used for producing timber?

A: 504 million acres of America's forestland is classified as "timberland," productive forests capable of growing 20 cubic feet of commercial wood per acre per year. But not all of that is used for timber production.


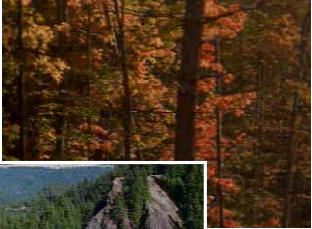
A portion of that is permanently managed for uses such as recreation, streamside protection, and wildlife. About 52 million acres of U.S. forestland - an area larger than the states of North and South Carolina combined- are set aside by law for non-timber uses, such as parks or wilderness areas. Of the 191 million acres of forestland contained within the National Forest System owned and managed by the federal government, only 49 million acres are available for forest management.

Q: Who owns the nation's commercial forests?

A: Of the nation's 504 million acres of timberlands, 146 million acres, or 29 percent, are owned by federal, state and local governments. Fifty-eight percent of these productive woodlands -some 291 million acres- are held by some 10 million individual private landowners. About 67 million acres, or 13 percent of the total commercial timberlands, are owned by the forest products industry.




Carbon Sequestration



- **Photosynthesis**
 - Absorbing CO₂
 - Releasing O₂
 - Adding biomass


4 lbs. of CO₂ = 3 lbs. O₂ + 1 lbs. C

Source: www.reforestthetropics







Before we begin discussing code requirements and construction details, let's talk for a moment about certain characteristics of wood that cause some of the things that you see in the field.



Measuring Green

- Subjective
 - Opinion
 - Expert Opinion
 - Historical performance
- Objective
 - Environmental Tools
 - Life Cycle Assessment (LCA)



Let us first look at environmental performance.

Methods of assessing environmental impact are complex and often controversial because they call for mixtures of objective and subjective analysis, and, some values and considerations are difficult to quantify.

Therefore, it is important, whenever practicable, to base environmental impact analysis upon known facts using scientific processes, rather than, on subjective opinions.



Sustainability



International
Organization for
Standardization

- “Green building” and “sustainable building” are terms that are often used interchangeably.
- Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (ISO 14050)





Sustainability

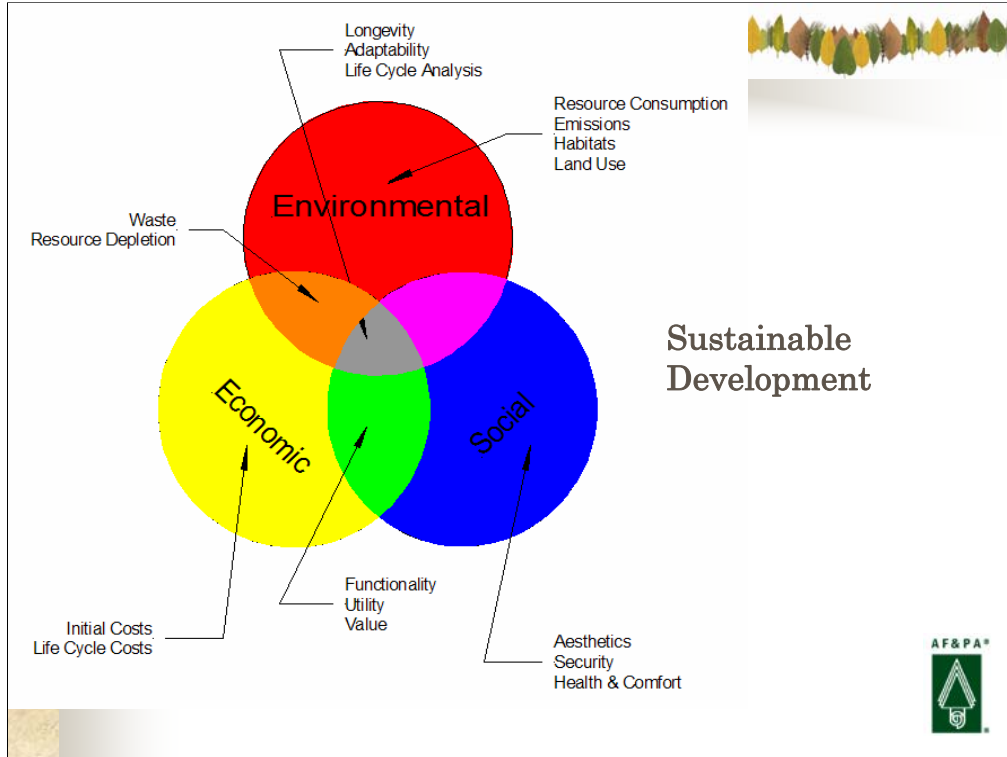
- ASTM E2114:
 - “**Sustainable building**, n—see green building.”
 - “**Green building**, n—a building that provides the specified building performance requirements while minimizing disturbance to and improving the functioning of local, regional, and global ecosystems both during and after its construction and specified service life.
 - “A green building optimizes efficiencies in resource management and operational performance; and, minimizes risks to human health and the environment.”




AMERICAN FOREST & PAPER ASSOCIATION



American Wood Council

Engineered and Traditional Wood Products






- Sustainable development considers:
 - Environmental Impacts
 - Mitigates negative impacts and promotes positive impacts.
 - Economic Impacts
 - Quantifies and optimizes direct and indirect economic impacts to greatest extent possible.
 - Social Impacts
 - Contributes to a positive quality of life for current and future generations.






- Sustainability is an ideal.
 - The practical application of general principles of sustainability relies upon balancing environmental, economic, and social impacts and committing to continual improvement to approach the ideal.






Life Cycle Assessment



- “Cradle to Gravel” analysis
- Elements include
 - goal and scoping
 - inventory analysis
 - impact assessment
 - interpretation






LCA Programs - BEES®

- ***Building for Environmental and Economic Sustainability***
 - National Institute of Standards and Technology (NIST)
 - <http://www.bfrl.nist.gov/oea/bees.html>




Over the last eight years, the [Building and Fire Research Laboratory](#) of the [National Institute of Standards and Technology](#) has developed and automated an approach for measuring the life-cycle environmental and economic performance of building products. Known as BEES® (Building for Environmental and Economic Sustainability), the tool is based on consensus standards and designed to be practical, flexible, and transparent. BEES reduces complex, science-based technical content (e.g., over 400 material and energy flows from raw material extraction through product disposal) to decision-enabling results and delivers them in a visually intuitive graphical format.

BEES measures the environmental performance of building products by using the life-cycle assessment approach specified in ISO 14000 standards. All stages in the life of a product are analyzed: raw material acquisition, manufacture, transportation, installation, use, and recycling and waste management. Economic performance is measured using the ASTM standard life-cycle cost method, which covers the costs of initial investment, replacement, operation, maintenance and repair, and disposal. Environmental and economic performance are combined into an overall performance measure using the ASTM standard for Multi-Attribute Decision Analysis. For the entire BEES analysis, building products are defined and classified according to the ASTM standard classification for building elements known as UNIFORMAT II.



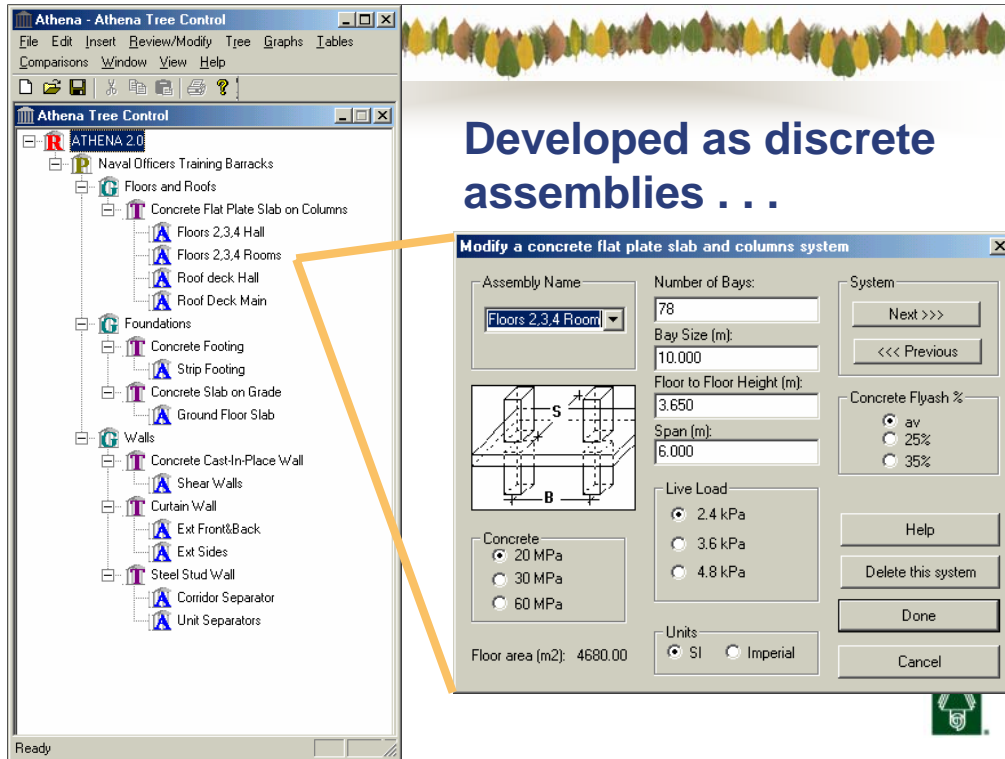
Athena Institute

- Sustainability of the built environment
- *Environmental Impact Estimator – LCA*
 - Extensive LCI database
 - Access to the US LCI database.
 - Simulates over 1,000 different assembly combinations
 - Can model 95% of the building stock in North America.
 - <http://www.athenasmi.ca/>



The Athena Institute is dedicated to sustainability of the built environment, a goal that can only be achieved by meeting the building community's need for better information and tools. From its Canadian offices, and through its US affiliate, Athena Institute International, the not-for-profit Athena organization undertakes and directs various research and development activities that make it possible to factor environmental considerations into the design process from the conceptual stage onward

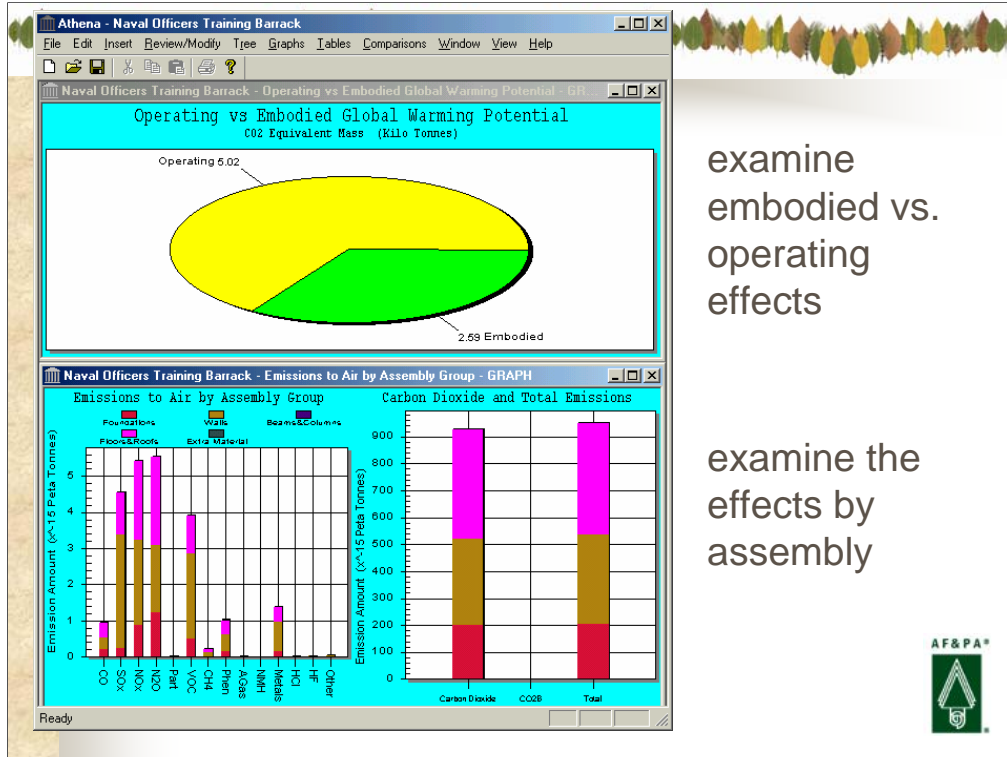
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Shows environmental effects of changes in shape, design or material make-up of a building

Allows designers to optimize operating+embodied energy effects over the complete building life cycle

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examine
embodied vs.
operating
effects

examine the
effects by
assembly



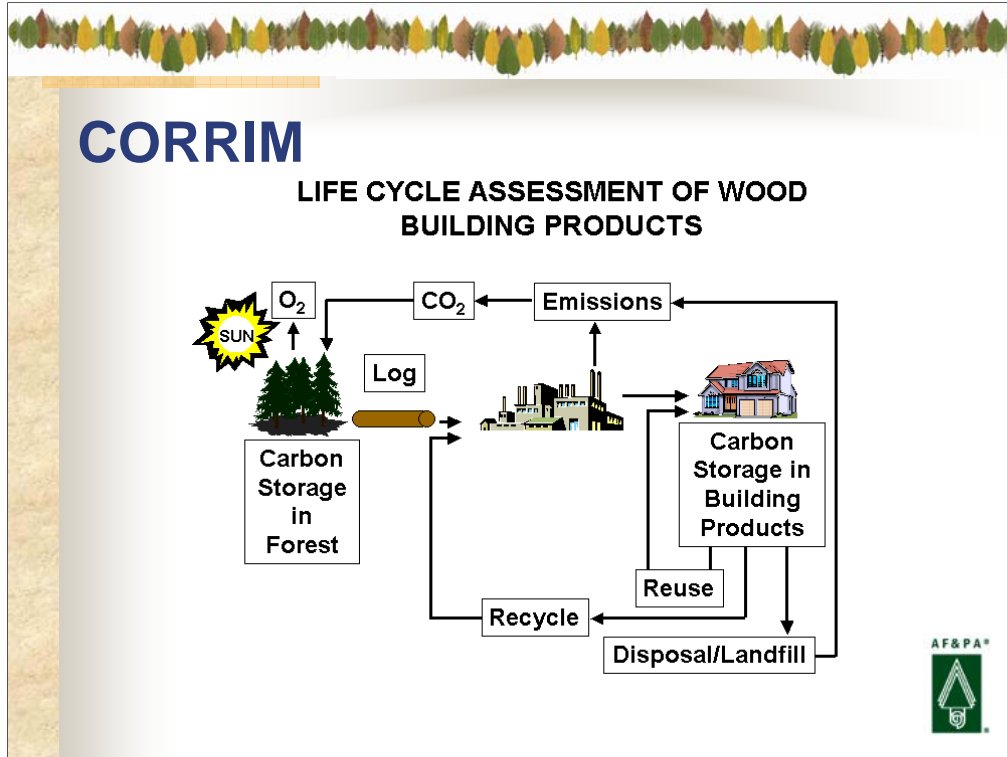
A range of environmental indicators without weighting




Consortium for Research on Renewable Industrial Material's (CORRIM)

University of Washington
Oregon State University
Washington State University
Purdue University
University of Minnesota
University of Idaho
North Carolina State University
Louisiana State University
USFS Forest Products Laboratory
Mississippi State University
Virginia Polytechnic Institute









Example of Whole House LCA Analyses to Compare Building Materials



- **Compared wood- to steel-framed home for Minneapolis**
- **Compared wood-framed to concrete block wall home for Atlanta**

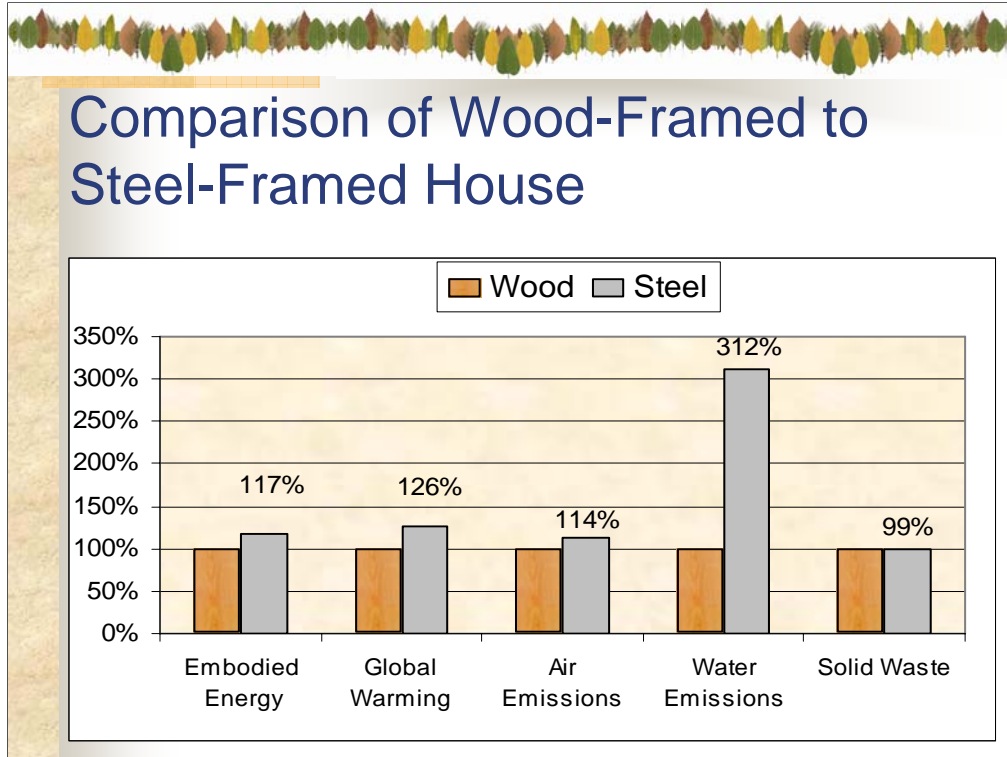


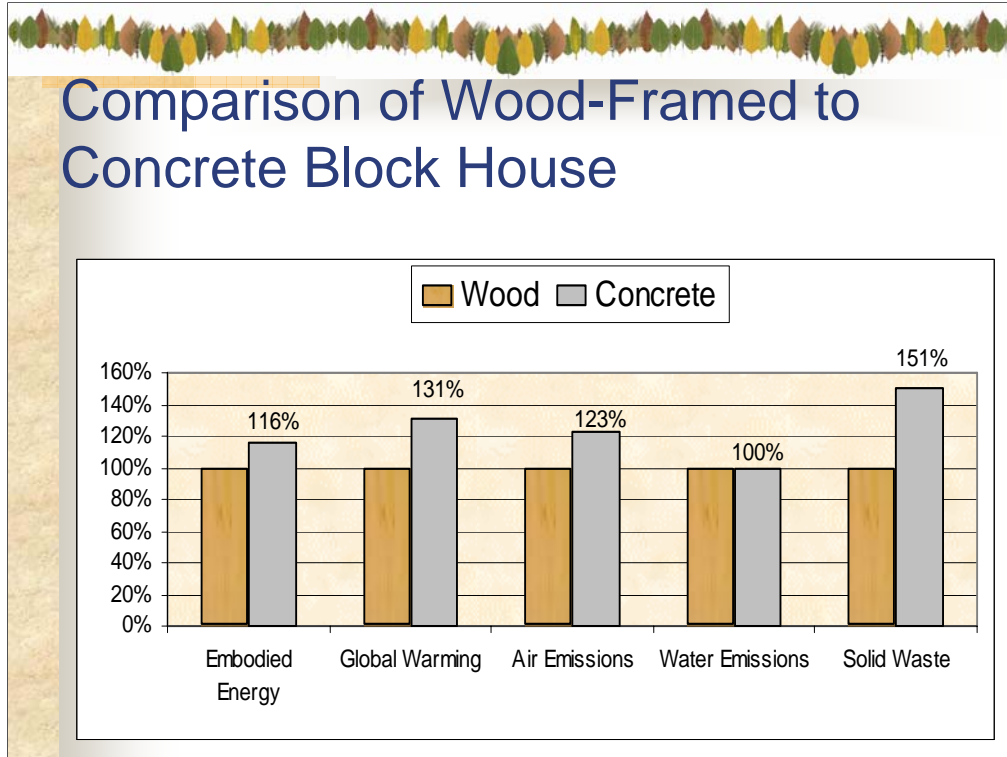


Life Cycle Assessment In Terms of Performance Indices

- Embodied Energy
- Global Warming Potential
- Air Emissions
- Water Emissions
- Solid Waste
- Resource Use









Before we begin discussing code requirements and construction details, let's talk for a moment about certain characteristics of wood that cause some of the things that you see in the field.

Sustainability guidelines and rating systems provide a consistent reference for analysis, evaluation, monitoring and reporting of sustainable building, including: all stages in construction, during feasibility analysis, planning, design, construction, maintenance, renovation, retrofit, reuse, and deconstruction.

Many such rating systems exist in the marketplace and many contractors and builders are incorporating environmental elements of sustainable building into current practice.



Rating Systems

- Commercial
 - LEED
 - Green Globes
- Residential
 - NAHB Model Guidelines
 - Home grown



Guidelines typically contain strategies or solutions for sustainable design.

The newest generation of guidelines are moving away from proxy measures toward performance standards with measurable outcomes.

Such building strategies are most effective when they are integrated from the very beginning of a project, but can be useful at any point in the building process.

Rating systems use a scoring system designed to evaluate buildings against a selected practice for sustainable performance.


Some utilize scientific-based protocols, like LCA and LCC, while others utilize subjective, proxy benchmarks.



LEED NC - Point Categories


- Sustainable Sites (14 pts)
- Water Efficiency (5 pts)
- Energy & Atmosphere (17 pts)
- **Materials & Resources (13 pts)**
- **Indoor Environmental Quality (15 pts)**
- Innovation & Design Process (5 pts)






LEED-NC v2

- MR 4.1 and MR 4.2 Recycled Content
 - Particleboard
 - www.pbmdf.org
 - Salvaged wood
 - 87% and 68%, respectively



http://www.motheearthnews.com/menarch/archive/issues/170/170_images/170-014-01-lifting.jpg



MR 4.1 Recycled Content: Use 5% post-consumer or 10% post consumer + 1/2 post-industrial

Intent


Increase demand for building products that incorporate recycled content materials, therefore reducing impacts resulting from extraction and processing of new virgin materials.

Requirements

Use materials with recycled content such that post-consumer recycled content constitutes at least 5% of the total value of the materials in the project OR combined post-consumer and 1/2 post-industrial recycled content constitutes at least 10%.


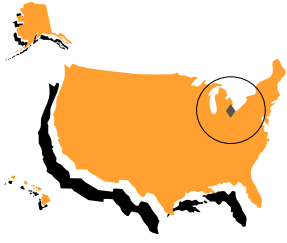
The value of the recycled content portion of a material or furnishing shall be determined by dividing the weight of recycled content in the item by the total weight of all material in the item, then multiplying the resulting percentage by the total value of the item.

Mechanical and electrical components shall not be included in this calculation.



LEED-NC v2

- MR 5.1 and MR 5.2
Regional Materials
 - Lumber
 - Engineered
Wood Products
 - Panel Products
 - 96% and 63%,
respectively



MR 5.1 Regional Materials: 20% manufactured regionally

Intent

Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the regional economy and reducing the environmental impacts resulting from transportation .

Requirements

Use a minimum of 20% of building materials and products that are manufactured*

regionally within a radius of 500 miles.

* Manufacturing refers to the final assembly of components into the building product that is

furnished and installed by the tradesmen. For example, if the hardware comes from Dallas,

Texas, the lumber from Vancouver, British Columbia, and the joist is assembled in Kent,

Washington; then the location of the final assembly is Kent, Washington.


1 Point

MR 5.2 Regional Materials: 50% extracted regionally

Intent




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All rights reserved. Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the regional economy



LEED-NC v2

- MR 6 Rapidly Renewable
 - Bamboo
 - Straw bale
 - Other agri-fiber
 - 6.1% of projects



MR 6 Rapidly Renewable

Intent


Reduce the use and depletion of finite raw materials and long-cycle renewable materials

by replacing them with rapidly renewable materials.

Requirements


Use rapidly renewable building materials and products (made from plants that are typically harvested within a ten-year cycle or shorter) for 5% of the total value of all building materials and products used in the project.

Establish a project goal for rapidly renewable materials and identify materials and suppliers that can achieve this goal. Consider materials such as bamboo flooring, wool carpets, straw board, cotton batt insulation, linoleum flooring, poplar OSB, sunflower seed board, wheatgrass cabinetry and others. During construction, ensure that the specified rapidly renewable materials are installed.



LEED-NC v2

- MR 7 Certified Wood
 - Forest Stewardship Council
 - 27% of projects



MR 7 Certified Wood

Intent

Encourage environmentally responsible forest management.

Requirements

Use a minimum of 50% of wood-based materials and products, certified in accordance with the Forest Stewardship Council's Principles and Criteria, for wood building components including, but not limited to, structural framing and general dimensional framing, flooring, finishes, furnishings, and nonrented

temporary construction applications such as bracing, concrete form work and pedestrian barriers. To qualify for this credit, wood-based materials and products must constitute at least 2% of the total value of all materials for the building.



LEED-NC v2

- EQ 4.4 Low-emitting Materials
 - Panel Products
 - 43% of projects



<http://www.brims.com.au/brimsboard.htm>



Low-Emitting Materials: Composite Wood

Intent

Reduce the quantity of indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well-being of installers and occupants.

Requirements

Composite wood and agrifiber products must contain no added urea-formaldehyde resins.

FORMALDEHYDE EMISSION LIMITS

Formaldehyde emission limits are established for particleboard in ANSI Standard A208.1. These

include separate emission limits for industrial particleboard (0.30 ppm) and particleboard

flooring grades (0.20 ppm). The limits are based on a product loading of 0.43 m²/m³ (0.13

ft²/ft³) of room volume. This loading reflects the use of particleboard as floor decking in a

manufactured home. Various overlays and surface treatments are known to

significantly reduce product emissions. For additional information about emissions, see the CPA Technical Bulletin

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Green Building Initiative (GBI)

- Established in 2004
- Mainstream builders and developers
- Residential and commercial focus



www.thegbi.com



Green Globes™

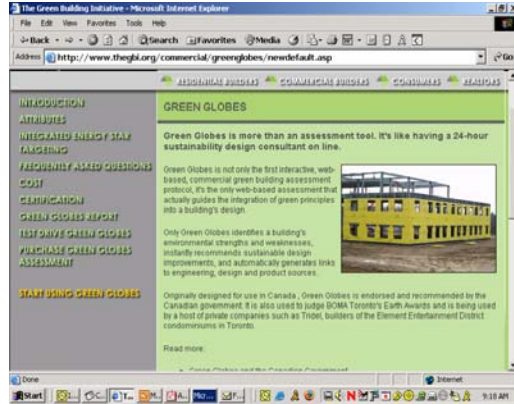
Newest addition to the BREEAM/Green Leaf suite of assessment tools that are the first interactive, web-based, commercial building assessment protocols.

Green Globes™ Canada developed with support of federal and provincial ministries and public utilities and in the UK, by the RICS foundation and Faber Maunsell.

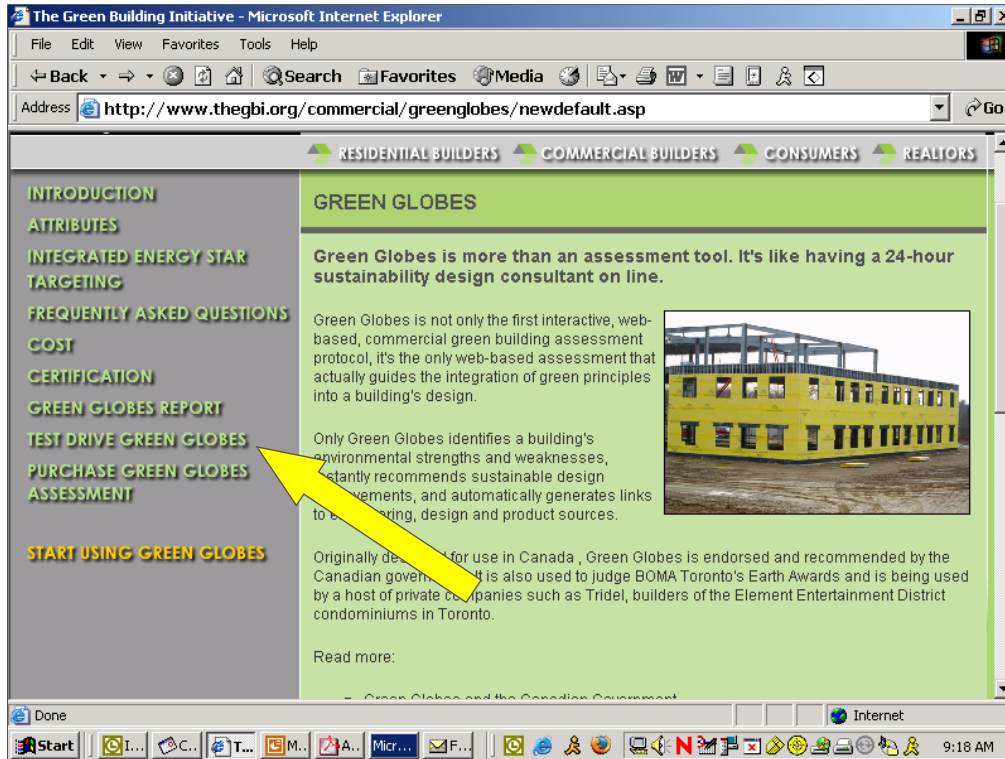
Green Globes™ US developed under guidance of the Green Building Initiative for the US market.

GBI - Green Globes

- Commercial
- On the Internet
- Point-Based System
- User Inputs
- Questionnaire



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American Wood Council
Engineered and Traditional Wood Products



Easy to use

Quick

User-friendly questionnaire

Automated reporting with achievements and recommendations (report can be edited)

Good source of additional information – links to websites


Calculates energy, potential energy savings

Makes it easy to compare buildings within a portfolio

Good basis for an Action Plan


Easy to update reports as improvements are made to the building


Affordable



Areas of Assessment



- Project Management
- Site
- Energy
- Water
- Resources
- Emissions, Effluents & Other Impacts
- Indoor Environment






E.1 – Low Impact Systems & Materials

- Select materials with:
 - Lowest life cycle environmental burden
 - Lowest embodied energy



No equivalent LEED section



Low-Emitting Materials: Composite Wood

Intent

Reduce the quantity of indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well-being of installers and occupants.

Requirements

Composite wood and agrifiber products must contain no added urea-formaldehyde resins.

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significantly reduce product emissions. For additional information about emissions, see the CPA Technical Bulletin



E.2 – Minimal Consumption of Resources

- Conserve resources
 - Specify materials with recycled content
 - Specify renewable sources based on LCA
 - Specify locally manufactured materials based on a LCA.

LEED MR c3
LEED MR c4
LEED MR c6



Low-Emitting Materials: Composite Wood

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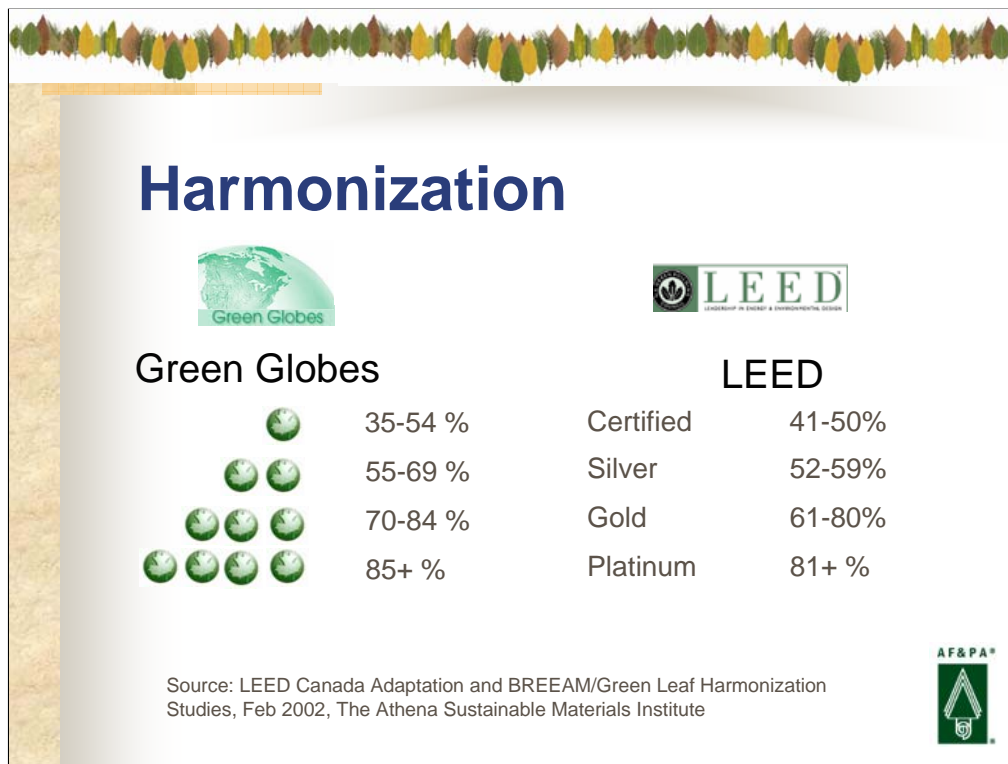
E.2 – Minimal Consumption of Resources

- Certified lumber and panel products
 - SFI (Sustainable Forestry Initiative)
 - FSC (Forestry Stewardship Council)
 - ATFS (American Tree Farm System)
 - CSA International

LEED MR c7




Points are assigned to each aspect being evaluated. These are grouped into seven sections for Project Management; Site; Energy; Water; Resources; Emissions, Effluents and Other Impacts; and Indoor Environment. The total is 1000 points, and as you can see on the slide, the greatest number of points is appropriately associated with Energy.



In discussing Green Globes, LEED is always raised.


The fact is that Green Globes and LEED are similar and their ratings can be harmonized. Both systems are derived from the United Kingdom’s Building Research Establishment Environmental Assessment Model, developed by Nigel Howard. Mr. Howard brought the UK model to the U.S. where it was used as the basis for LEED. Nigel is now in charge of LEED at the U.S. Green Building Council. For Canada and the U.S., the same BREEAM model was modified for each country by ECD Engineering.

While Green Globes is complementary to LEED it is much more flexible, less expensive, and more generally applicable.




NAHB Residential

- Green Home Building Guidelines
 - Checklist
 - User's Guide
- Released in January 2005
- Model guidelines



www.nahbrc.org




Local Rating Systems are almost endless

Rating systems have been developed by governments, utilities, building industry associations and through local initiatives.

Some of the more notable are:


- Seattle's Sustainable Building Action Plan and Build Smart
- Oregon's Earth Advantage Commercial Buildings
- Austin's Green Building Program
- Scottsdale's Green Building Program
- Denver's Built Green
- Boulder's Green Points Program
- Atlanta's Earth Craft House
- Vermont Building for Social Responsibility

The NAHB Model Guidelines are divided into two sections. The first section is the "Checklist," which provides a brief description of each credit area and strategy for assuring conformance. The section is the "User's Guide." The Guide contains over 200 pages of useful commentary on each credit area, including construction details and internet links to other applicable information.



Content of Model

- **Sections**
 - lot preparation and design
 - **resource efficiency**
 - water conservation
 - indoor environmental quality
 - energy efficiency
 - homeowner education






2.1 Reduced Quantity of Materials & Waste


- **2.1.2 Advanced framing techniques**
 - 19.2” and 24” on-center framing
 - Single top plates
 - Right-sized headers
 - No headers in non-bearing walls
 - Two stud corners






2.1 Reduced Quantity of Materials & Waste


- **2.1.3 Building Dimensions**
 - Parallel to span – 4’ increments
 - Perpendicular to span – 2’ increments
 - Optimize window/door locations





2.2 Enhance Durability & Reduce Maintenance

- 2.2.12 Employ and show on plans the following flashing details:
 - Around windows and doors
 - Valleys
 - Deck/house juncture
 - Roof/wall junctures, chimneys step flashed
 - Drip cap above windows and doors





2.6 Use renewable materials

- 2.6.1 Use materials manufactured from renewable resources
 - soy-based insulation
 - Bamboo
 - wood-based products



Forintek





2.6 Use renewable materials


- 2.6.2 Use certified wood for wood and wood based materials and products from all credible third party certified sources, including
 - SFI
 - American Tree Farm System
 - CSA
 - FSC





2.7 Use resource-efficient materials

- 2.7.1 Use products that contain fewer resources to meet the same end-use as traditional products





2.8 Innovative Options

- 2.8.1 Use locally available, indigenous materials
- 2.8.2 Use a life cycle assessment (LCA)
 - compare the environmental burden
 - use the most environmentally preferable product





Before we begin discussing code requirements and construction details, let's talk for a moment about certain characteristics of wood that cause some of the things that you see in the field.



SFI Program Overview

- Certification programs in U.S. and Canada
- The SFI program status
- Future direction

www.aboutsfi.org



Today we will speak briefly about all the sustainable forestry and certification programs that are in play in the U.S. and Canada, the current status of the SFI program and what we see is the future direction of the certification issue. The North American forest products industry is strongly supportive of sustainable forestry and sustainable building processes and rating systems.

As a condition of membership in AF&PA, companies must participate in the Sustainable Forestry Initiative (SFI®).

Canadian companies participate in Canada's National Sustainable Forest Management Standard of the Canadian Standards Association (CSA) and some also participate in SFI or Forest Stewardship Council's (FSC's) sustainable forestry practice.

These sustainable forestry practices have repeatedly been found to be comparable by Metafore and Pinchot, yet LEED only recognizes FSC certified wood.



There are four programs of note that operate in the U.S. and Canada.

- The Canadian Standard—CSA is only used in Canada
- The Forest Stewardship Council program is applied in both the U.S. and Canada
- The American Tree Farm System, designed for family forest owners with less than 10,000 acres is applied in the United States (note there are 10,000,000 family forest owners in the US that own about 60% of the timberland)
- The SFI program is the largest of all of the programs operating in the U.S. and Canada. In a study for the Potlatch Corporation, the Pinchot Institute for Conservation concluded:

“that forest management under either or both (SFI and FSC) standards will result in well-managed, sustainable forests that provide important ecological, economic and social benefits. We found that the FSC and SFI systems rated quite similar on most of the elements tied directly to sustainable forest management practices.”

Source: <http://www.pinchot.org>

Metafore, a non-profit organization that promotes the conservation, protection and restoration of the world’s forests concluded:

“The three major third-party forest certification systems operating in North America—the Canadian Standards Association, Forest Stewardship Council and the Sustainable Forestry Initiative® Program—present a range of viable models for independent forest certification systems from structural and operational design perspectives. Each system has adapted to practical realities in different ways. Nonetheless, each system is transparent, includes opportunities for input from different stakeholders, and has procedures for



Current Reach of SFI® Program

- 222 program participants
- Represents 152 million acres
 - 124 million third party certified



There are currently 222 program participants which include:

- Forest products and paper companies—large, small, integrated, and non-integrated
- Conservation groups (e.g. The Conservation Fund)
- Foundations (e.g. Ames Plantation)
- Universities (e.g. Duke)
- Public Agencies (e.g. St. Louis County, MN)
- State Forests (e.g. North Carolina)

These 222 program participants (PPs) own or control over 152 million acres, of which 124 million are third party certified. In addition, these PPs represent the vast majority of the paper production in the United States and many of those do not own forestland. Yet they are expanding the practice of sustainable forestry across the landscape through their SFI procurement programs that also be third party certified.



Independent Governance

- 15 member board from ENGOs, professional/ academics and industry
- Non-profit organization
- SFI Program Participant CEOs



In July of 2000, an independent Sustainable Forestry Board was established to oversee the SFI Standard and the Certification Procedures. This 15 member board has balanced representation from the ENGO community, professional and academic and industry. It is an independent non-profit 501c3 organization. AF&PA CEOs (SFI Program Participants) represent 1/3 of the Board and nominated by the AF&PA Board of Directors. All of the other Board members are nominated by and elected to membership by the SFB.



Enhanced 2005-2009 SFI Standard

- Adopted 1/10/05
- New provisions for:
 - Old growth/endangered forests
 - Management on public lands
 - Conversions to plantations
 - Pesticide use
 - Rigor of SFI certifications



There have been two major rounds of enhancements to the SFI Standard by the Sustainable Forestry Board, in 2001 and again in 2004. The latest enhancements, adopted January 10, 2005, were the most comprehensive and addressed a number of perceived soft spots or frequent criticisms by detractors. There are a number of other enhancements but some of the key ones are:

- Old growth/endangered forests
- Management on public lands
- Conversions to plantations
- Pesticide use
- Rigor of SFI Certifications



Certification

- Voluntary, market based
- Mandatory for label use
- Tremendous growth
 - 0.7 million acres in 1999
 - 124 million acres currently
 - 90% of volume via certified procurement system



We strongly believe certification should be voluntary and market based. SFI participation by AF&PA members is mandatory and there are number of members and many licensees that do not have market incentives or pressure to commit to certification at the current time. The SFI goal of continuous improvement (rising tide floats all boats) is also part of our strategic decision to not make certification mandatory.

And, you can see from our data, this strategy is working nicely. Of the 152 million acres enrolled, 124 million are currently certified.

It is also important to note that 90% of the volume or raw material our manufacturing facilities utilize are sourced through SFI certified procurement systems. A mill that has been certified to the SFI standard knows at least the following about the virgin fiber it uses:

- The volume that comes from the owner's SFI-certified forests
- The volume that comes from other sources by category, such as public or private forests
- The percentage of fiber harvested by a qualified (trained) logging professional
- If sourced from outside North America, that the procurement system avoided sources that are illegally logged, or are biodiversity hotspots or major tropical wilderness areas as identified by Conservation International

(Illegal logging is defined as harvesting activities that result in theft of timber or logs, or cutting in parks, reserves or other similar areas where harvesting activities are otherwise precluded by law.

Biodiversity hotspots and major tropical wilderness areas are defined as areas outside North America identified in Conservation Internationals conservation strategies @ as of July 1, 2002.)

Other programs' chain of custody systems typically track in detail only the fiber originating from that program's certified forests.



SFI On-Product Labeling



- Available to any SFI program participant that is third-party certified and meets label use requirements



- Qualify on a mill-by-mill and product-by-product basis



Some of our customers also told us they wanted an SFI on-product label. We now have several labels available for different types of SFI program participants including participating printers and manufacturers. An SFI program participant must be third-party certified and must meet the SFI label use requirements in order to qualify to use the label. The label can be approved for use on a mill-by-mill facility or on a product-by-product basis for a particular mill. We currently have several hundred facilities qualified by to use the label and two dozen or so who are using it for various products.

There may also be other ways that printers and others can work with their customers and suppliers to use the SFI label without becoming SFI program participants. If you have a desire to use the label, or have a customer or specific job that needs the label, please contact our office of Label Use and Licensing and we can work through your issue and see how best to accomplish your goals.



The SFI program has had some success in working with customers to ensure their procurement policies are inclusive of, or specifically recognize the SFI program

Our work is not done. We must continue to promote the SFI program and work with our customers and allies to build greater awareness and acceptance.



Learn More About the SFI Program


- Visit the following websites:
 - aboutsfi.org – SFI® Program
 - sfiprogram.info – SFI® International
 - aboutsfb.org – Sustainable Forestry Board



There is a great deal of information on the SFI program on these websites.

Visit the following websites:

- aboutsfi.org – SFI® Program—Consumer website supports label
- sfiprogram.info – SFI® International—Information developed primarily for European markets
- aboutsfb.org – Sustainable Forestry Board—Official website of the SFB—contains SFI Standard, Certification procedures, List of Certified companies, etc.



Summary

- Pursue a science-based solution
- Consider other rating systems
- Specify wood with confidence

