

It's Not Easy Being Green

Presented By: First Lastname
February 10, 2019

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 - IDC
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Course Description



This course assists design professionals in understanding the green attributes of hardwood flooring so that they can effectively specify wood flooring for their client projects, and meet potential green building program criteria.

Learning Objectives



- Understand the renewability of wood floors,
- Discuss the life cycle of wood floors,
- Describe the impact of wood flooring on natural resources,
- Identify the impact of wood flooring on global warming,
- Recognize the impact of wood flooring on landfill waste,
- Explain the impact of wood flooring on indoor air quality,
- Define low VOC finishes and adhesives,
- Summarize the sustainability of wood flooring,
- Convey the maintenance of wood flooring, and
- Detail the value of wood floors.

Wood as a Flooring Option



- Wood is renewable
- Other flooring options are not
- Trees = natural resource
- Trees regenerate
- No replanting required
- No human intervention needed



Sustainability



- USDA Forest Service
 - 1.6 trees planted per tree harvested
 - Standing volume more than double since 1950s
 - Responsible forest management
- 40-60 years to mature
- National Association of Home Builders
 - Wood floors last 100+ years
- Inventory not needed for 40-60 years
- Rapidly renewable for life cycle



Sustainability



- Wood 10x more insulating capacity than steel, aluminum
- Wood 5x more insulating capacity than concrete, cinder blocks

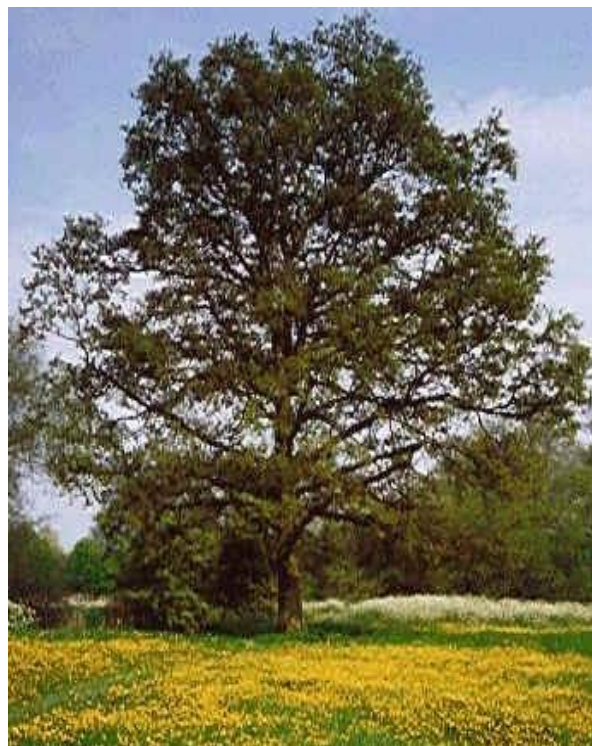
Wood as a Flooring Option



Life Cycle Inventory



Sapling



Mature Tree

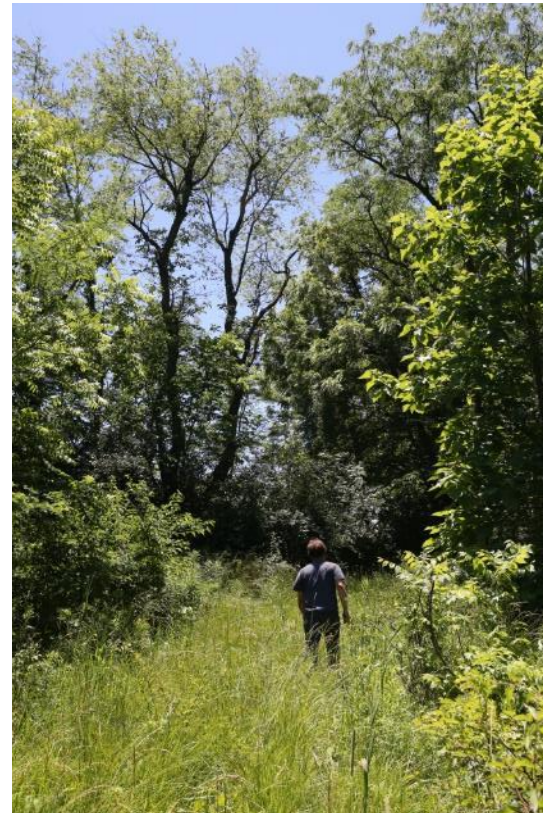


Finished Product

Impact on Natural Resources



- Saves natural resources
- Factory: forest
- Renewable energy source: sun
- Uses less water to produce than other flooring options
- Uses less energy to produce than other flooring options



Impact on Natural Resources



- Waste from wood flooring production used to fuel boilers for manufacturing process, to heat plant
- Goal is 100% use trees harvested

Impact on Natural Resources



- Some waste from production used to produce wood bricks, wood pellets
- Sold to consumers as highly efficient heating source

Impact on Global Warming

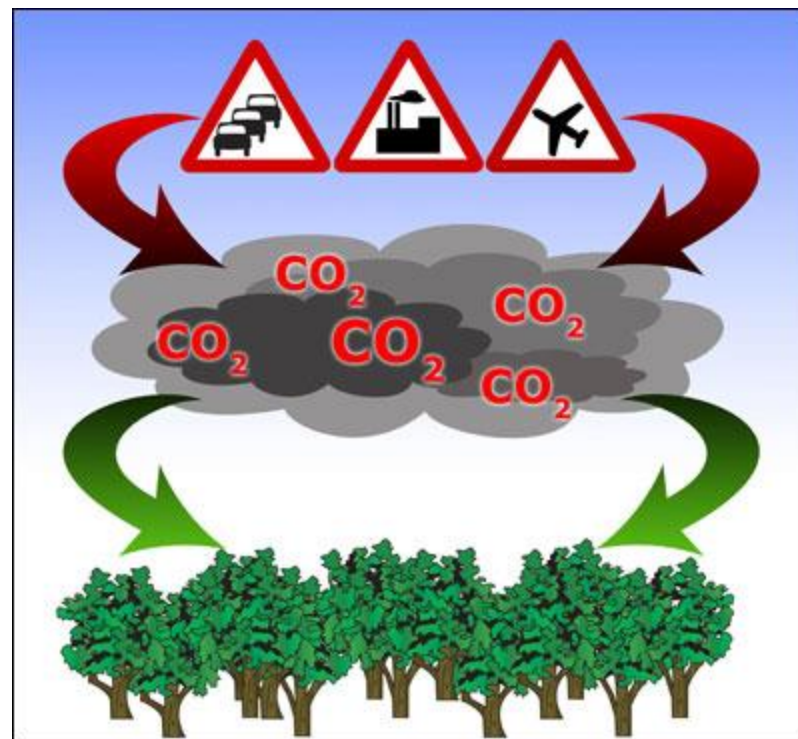


- Reduces global warming
- Carbon neutral product
- Takes in carbon dioxide during growth cycle
- Produces oxygen during growth cycle
- Stores carbon during service life



Impact on Global Warming

- 2 types of carbon dioxide
 - Anthropogenic = bad
 - Derived from burning fossil fuels (cars, etc.)
 - Biogenic = good
 - Derived from biomass in nature (trees, etc.)



Impact on Global Warming

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- Carbon dioxide emitted during wood combustion offset by carbon dioxide taken in during tree's life cycle
- Makes wood carbon neutral



Impact on Landfill Waste



- Reduces landfill waste
- Biodegradable
- Recycled
- Burned as fuel
- Recycling wood
 - Reclaimed flooring
 - Repurposed furniture
 - Pressed-wood products
 - Wood pellets, bricks
 - Mulch





- Reclaimed Flooring
 - Old wood reused as new wood flooring
 - Wood recovered from salvaged buildings
 - Logs recovered from river, lake bottoms from turn-of-the century logging era

Impact on Landfill Waste



- Reclaimed Flooring
 - White oak
 - Solid
 - Plank
 - Random widths
 - Old wine barrels
 - Barrel stamps preserved in flooring
 - Oil-based surface finish

Impact on Indoor Air Quality



- Allergy Triggers
 - Dust mites
 - Animal dander
- Accumulate
 - Curtains
 - Bedding
 - Upholstered furniture
 - Carpeting
- Wood floors
 - Minimize trigger accumulation
 - Improve indoor air quality



Impact on Indoor Air Quality



- Harris Interactive study
 - Vast majority of US homeowners believe family's health directly related to cleanliness of their floors
 - Majority believe wood floors most effective improving indoor air quality



- EPA
 - Hypoallergenic
 - Do not harbor microorganisms
 - Minimize dust, mold, animal dander
 - Subsequently can improve indoor air quality

What are VOCs?



- Volatile Organic Compounds
- Gases emitted from products
- Harmful to humans
- Short-term
 - Headaches, nausea, ear, nose, throat irritation
- Long-term
 - Liver damage, kidney damage, central nervous system damage



- Monitors indoor air quality
- Established strict VOC regulations
- Regulates VOCs in wood flooring finish, adhesives
- Strictest VOC standards in nation
- Ozone Transport Commission regulations in other states
- Other states using CARB model



- Severe penalties for companies not complying
- Can result in tens of thousands of dollars in fines per violation, per day
- Penalties applied to contractor, product distributor, product manufacturer



Certified Forest Programs



- Forest Stewardship Council (FSC)
- Sustainable Forestry Initiative (SFI)
- American Tree Farm System (ATFS)

Certified Forest Programs



- Largest portion of forest land privately owned
- Only harvest once a generation
- Time consuming, expensive to become certified
- State laws, programs encourage responsible forest management

Maintenance



- No harmful chemicals necessary
 - Sweep, dust mop
 - Vacuum with beater bar turned off
 - Clean spills with damp cloth
 - Use professional low VOC cleaners to restore shine



Maintenance



- Place felts pads on furniture legs to avoid scratches
- Place walk off rugs at all entrances to avoid scratches
- Restore luster with maintenance coat
- Repair deep scratches, other damage with professional sand, refinish

Value of Wood Floors



- With proper maintenance, wood floors can last hundreds of years
- Can be sanded, refinished numerous times
- Stain can provide new look
- Add medallions, borders, etc., while maintaining existing material
- Adapts to any décor

Value of Wood Floors



- Real estate agents report homes with wood floors sell faster, more money
- Increase up to 10% more than homes without wood floors
- Excellent long-term value

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Summary



Summary



- Renewable flooring option
- Favorable life cycle
- Save natural resources
- Reduce global warming
- Reduce landfill waste
- Improve indoor air quality
- Minimize VOC exposure
- Sustainable
- Maintenance environmentally friendly
- Significant long-term value

Thank You

The logo for the Northwest Florida Area (nwfa) is located in the top right corner. It consists of the lowercase letters 'nwfa' in a white, sans-serif font, with a small green leaf icon integrated into the letter 'a'. The background of the top right corner of the slide features a photograph of a young child sitting on a couch and reading a book.

This concludes this course for:

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A photograph of a bedroom interior. The floor is made of dark wood planks arranged in a herringbone pattern. On the left, a bed with a dark headboard and a white and grey plaid blanket is visible. In the background, a dark nightstand holds a lamp with a glowing orange light. To the right, a white curtain hangs next to a dark curtain. The overall lighting is dim and warm.

Questions?