



BUILDING & REMODELING WITH FSC

For Residential Projects





Building & Remodeling with FSC is Developed by:



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Paper Provided by:



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Printing Provided by:



www.sandyinc.com

Media Provided by:



www.edcmag.com

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Special thanks to those who contributed to making this guide a success!!!

Building & Remodeling with FSC

Introduction



FSC is the best insurance policy the world's forests have.

Photo Credit: Northwest Natural Resource Group

If you are a developer, residential architect, homebuilder, remodeler or homeowner working on a residential project and you care about the environment, *Building & Remodeling with FSC* is essential for your toolbox. Forest Products Solutions has created the one-stop resource for incorporating responsible wood into your green residential project.

There is no doubt that building has a significant impact on the global environment. Residential construction accounts for 30% of the wood removed from US forests which makes it an even larger draw than the paper market. Forest Stewardship Council (FSC) certification gives you a tool for ensuring that the wood you use comes from responsibly managed forests. This guide provides you with methods to communicate the need and establish sources in your market so you can build with FSC-certified wood.

As globalization takes hold, more and more wood comes from outside of the US. Your choices in wood products drive not only the protection of biodiversity but also the fate of indigenous communities, the protection of water resources, and the ongoing removal of carbon gasses from our atmosphere. According to a recent study by the Global Canopy Programme (GCP) deforestation contributes 25% of the world's greenhouse gas emissions. Choosing the right wood helps stem global warming, protects people, and conserves forests. FSC is the best insurance policy the world's forests have.

Please use this guide to help conserve forests and reward forest managers and companies that share your values. Remember, wood is a renewable resource, but to be sustainable we must choose carefully. Using this guide makes it easy. Thanks for your contribution to forest conservation.

Michael P. Washburn, *Ph.D.*
President, Washburn Consulting



Forest Certification and FSC

Forest Certification



Principles of Forest Management

- Compliance with laws
- Tenure use rights and responsibilities
- Indigenous peoples' rights
- Community relations and workers' rights
- Benefits from the forest
- Environmental impact
- Management plan
- Monitoring and assessment
- Maintenance of high conservation value forests
- Plantations

See www.fscus.org for a more detailed explanation of these principles.

Photo Credits: The Collins Companies

Forest certification has been actively growing around the world for close to twenty years, as a method for forest land owners to prove to society that they practice responsible forestry. Prior to forest certification there was no mechanism for society to avoid buying forest products from irresponsible forestry practices. One reaction to these irresponsible forestry and logging operations was to boycott the use of wood products, or find alternatives to wood products. However, boycotts and the use of alternative products often results in forest land being converted to other economic uses, such as, grazing, agriculture or housing developments. Therefore, many leading experts believe that a forest certification system requiring landowners and manufacturers to invite third-party auditors to certify that their practices meet internationally recognized standards for responsible forest management, could answer some of society's concerns and stave off further damage to vulnerable ecosystems.

Since the early 1990's, forest certification systems have grown both in the number of manufacturing participants and in forested acres. Currently, there are more than 90 certification systems worldwide administered by government agencies, non-governmental organizations (NGOs), trade associations, and other entities. Each of these certification systems was created to demonstrate that a given forestry operation is meeting a particular set of standards. However, not all of these certification systems were created equal and not all of them require a transparent, multi-stakeholder process. In a world that is increasingly asking for more accountability and witnessing environmental degradation at the hands of natural resource-based industries, a transparent multi-stakeholder certification process that operates internationally and includes a system for tracking products is the only way to ensure protection of those forests.

Forest Stewardship Council (FSC)

The Forest Stewardship Council (FSC) is an independent, nonprofit organization that promotes the responsible management of the world's working forests through the development of standards, a certification system, and trademark recognition. A critical component of this system is the recognition of FSC's role as a facilitator of a collaborative process that unites stakeholders to form the FSC standard of forest management. The other key is the recognition that this process is dynamic, in that the



principles and criteria defining “good forestry” are subject to continual evaluation and improvement. Part of FSC’s uniqueness has resulted from this collaborative process, allowing the organization to interweave the best ideas of its diverse membership into solutions.

In 1994, FSC’s members approved an international set of principles and criteria. Under the FSC system, the principles and criteria provide the foundation for responsible forestry. Since its inception FSC’s third-party accredited certifiers have certified over 5,600 companies to sell FSC products in more than 70 countries, and nearly 225 million acres of forestland in 78 countries—an area larger than the states of Texas and Oklahoma combined. (As of June 2007)

FSC Membership

FSC’s membership is divided equally into three chambers:

Economic Chamber: Includes organizations and individuals with an interest in commercial forest products entities. A number of major retailers and forest products manufacturers are members of this chamber including Hayward Lumber, Columbia Forest Products and Tembec.

Social Chamber: Intended for indigenous organizations and social movements which have an active interest in environmentally viable forest stewardship. Members of the social chamber include unions, wood workers, indigenous groups, as well as organizations such as Forest Guild and Sustainable Northwest.

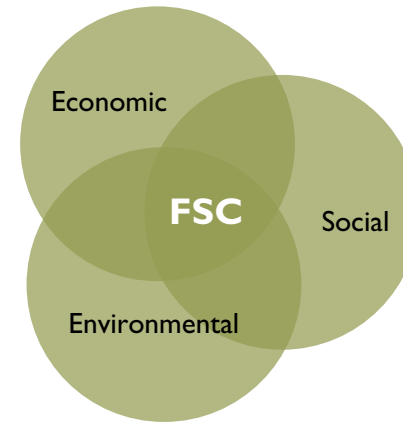
Environmental Chamber: Limited to non-profit organizations and NGOs with a demonstrated commitment to environmentally appropriate, socially beneficial, and economically viable forest stewardship. Some examples of current members include World Wildlife Fund, The Nature Conservancy, Greenpeace, National Wildlife Federation, and the Natural Resources Defense Council.

The purpose of the three-chamber system is to maintain a balance of voting power between the different interests within FSC. Each chamber has 33.3% of the voting power in the general assembly. Motions require an affirmative vote of 66.6% of the total vote to be adopted.



The principles and criteria that define “good forestry” are subject to continual evaluation and improvement.

Photo Credit: The Collins Companies



How Does FSC Certification Work?

Under the FSC system there are two types of certifications.

Forest Management (FM) certification applies to the actual forestland. This certification applies the FSC Principles and Criteria (and any FSC regional standards that may be present in the area) to the land base. In order for a parcel to receive FSC endorsement, its forest management practices must meet the FSC’s Principles and Criteria as certified by an FSC-accredited, third party auditor.

The certification process involves an initial assessment of the land, followed by annual audits. The certifier’s on-site visits verify compliance with FSC standards. A five-year contract is signed between the landowner and the certifier, committing the landowner to maintain the forest to FSC standards for the length of the contract. After five years, the process will start all over again with another full assessment, followed by annual audits.

Chain-of-Custody (COC) certification applies to the manufacturing and distribution chain that certified wood travels through before it is purchased by society. COC certification ensures that forest products carrying the FSC’s “checkmark-and-tree” label come from verified FSC-certified sources. Any use of the FSC label by a COC certificate holder must be pre-approved by the company’s certifier. All FSC claims are based solely on the origin of the wood, and in no way reference any aspect or quality of the product.

The chain-of-custody certification process is basically a verification of the manufacturer’s ability to separately track all FSC materials throughout their business, from purchasing and inventory control to manufacture and sale. For most organizations in North America this is a very simple, non-invasive process that verifies existing good business practices. COC certificate holders will have an initial assessment followed by annual audits, and enter into a five-year contract with the certifier.

FSC Labels

FSC-certified products that are sold can be labeled with one of the following:



To learn more about these labels please visit: www.fsc.org

FSC Project Certification

In 2006 FSC International approved a new standard for the certification of building projects that makes it possible to promote the use of FSC-certified wood. The standard's range of application is wide: from buildings, to houses, to sailboats and airports. The standard can be applied to anything that was built using FSC-certified wood.

Three pilot projects were initiated during the development of the standard and the first two projects were aiming for full project certification. This means that at least 50% of the cost or volume of the wood used in the project is FSC-certified and/or post-consumer recycled material. The remaining wood must be reclaimed material, or from FSC controlled sources. Projects under this scheme can be promoted under the name of FSC-certified - e.g. "FSC-certified airport".

The partial project certification option has no minimum input requirement for FSC-certified products. For example, houses built with FSC-certified window frames, doors, stairs and sheds can earn partial project certification which allows the owners to make claims such as "FSC-certified wood was used to build the stairs in this home."

If you are interested in obtaining project certification, please contact an FSC-accredited certification body: www.fscus.org/certifiers. To read the standard in full detail, please go to www.fsc.org and look for: FSC-STD-40-006 FSC Chain of Custody Standard for Project Certification.

Photo Credit: NorthWest Crossing



Making it Happen: Developers

Strategies for Making it Happen as a Developer

Developers are often hard pressed to develop new home living experiences which will differentiate their communities and homes from their competitors. As future homebuyers become more familiar with global warming, energy efficiency, climate change, tropical deforestation and other human related impacts on the planet, developers should expect to answer more questions about the potential environmental impact from their communities and homes. Incentives for planning and developing a green community include: reduced operating costs, higher value, a marketing edge, and staying ahead of government regulations.

It can be a daunting task to ask your homebuilders to 'build green' and 'reduce the negative environmental and social impacts' of our community and homes without providing them guidance. Currently, there are over forty-five local or regional residential green building programs in North America focused on improving the construction industry's use of natural resources. These programs have been developed by trade associations,



Incentives exist for planning and developing a community to meet green standards.

independent non-profits, academic institutions, municipal governments, and utility companies. Even though all of these programs have the same goal of reducing the home building industry's impact on the environment, they employ different strategies to meet that goal.

One common element in all of these programs is that Forest Stewardship Council (FSC) certified wood products are highlighted as a method for earning points toward a greener community or home. However, the FSC-certified wood market is still growing; therefore FSC-certified products are not always readily available. Still, projects have been successful in building with FSC when they take the time to research availability, provide incentives in contracts, order in advance and educate the homebuilders/subcontractors/suppliers about the project's goal for using FSC-certified wood for specific applications.



Projects have been successful in building with FSC when they take the time to research availability, provide incentives in contracts, and educate others about the project's goal.

Photo Credit: NorthWest Crossing

Initially you will have to select a green building standard for your prospective homebuilders. This selection should meet your business and environmental goals, plus resonate with your potential home buyers. Look into the local, regional, and national green building programs. Keep in mind that, a local program might be easy to use due to that fact that it was designed for your region, but a national program may have more marketing power.

Once you have determined the level of certification you want to achieve, the next step will be to decide which credits or points they will need to reach your certification goal. Providing resources to prospective builders on green building and FSC will allow them to become familiar with new industry terms, practices, and products. (See Resources section of this guide)

Building material suppliers, flooring showrooms, cabinet manufacturers and other wood processors are still becoming familiar with their role in the new emerging industry of green building and FSC-certified products. Due to the green building movement's youth, many suppliers of home building products have heard little about FSC products and therefore have not earned a Chain-of-Custody (COC) certificate. The value of a developer educating their homebuilders, subcontractors, and suppliers will be very important as the project goes into the building phase.



Case Study – Northwest Crossing in Bend, OR



New Urbanism has become a positive trend in many parts of the country.

Photo Credit: NorthWest Crossing

Bend, Oregon is an idyllic place with over 250 days of sunshine, year round snowcapped mountains, and a development called NorthWest Crossing. West Bend Property Company began development of this project in 2002. The plan focused on developing a 486 acre mixed use community that would include 1,000 homes in an area with restaurants, shops, parks, schools and trails. The goal was to make this development about ‘livability,’ by planning and designing it using the ‘traditional neighborhood development’ concept. This concept, often referred to as New Urbanism, has become a positive trend in many parts of the country as developers look to offer homebuyers with a different option than the industry standard ‘cookie cutter’ suburban development.

West Bend Property Company was not just interested in providing trendy, well designed homes and buildings without any concern for the buildings themselves. Working off a strong sustainability ethos, West Bend Property Company insisted that all of its homes earn EarthAdvantage certification and that the mixed use commercial buildings earn Leadership in Energy & Environmental Design (LEED) certification. EarthAdvantage is a non-profit organization based in Portland, OR, that works with builders and developers to bring the most energy efficient, sustainable and healthy homes to the market. LEED, developed by the US Green Building Council (USGBC), is a nationally accepted green building rating system for the design, construction, and operation of high performance green buildings.

Within the EarthAdvantage checklist there are a number of volunteer green building design features and material selections that would allow a given home project to earn points toward certification. The use of Forest Stewardship Council (FSC) certified wood products in the form of dimensional lumber, plywood and interior finishes is one way to earn a number of points. At a minimum, West Bend Property Company required its builders to adhere to the entry level certification of the EarthAdvantage program, but several builders have exceeded that minimum requirement and built homes certified as platinum.

David Ford, General Manager of West Bend Property Company, provides some insight into his company’s sustainable business ethos, “We encouraged our builders to be as green as possible. We believe green business practices are the way to operate, now and for the long term.”



“We recognized about five years ago that green and sustainable business practices were an approaching wave, now we believe if a business is not committed to green and sustainable business practices they will be left behind. The market will only continue to demand more sustainability.”

David Ford
General Manager of West Bend
Property Company

Photo Credit: West Bend
Property Company

In cooperation with 3e Strategies, EarthAdvantage, and other organizations, West Bend Property Company sponsored a number of educational forums for builders in their region. These green building forums included speakers, workshops, and green building product manufacturers and suppliers who could assist the local builders with sourcing products to build EarthAdvantage certified homes in NorthWest Crossing.

One company that attended the green building forum in Bend, OR was Miller Lumber Company. Charley Miller, CEO at Miller Lumber, had already received an FSC COC certificate and his company played a vital role in working with builders to find the products they needed in order to build green



The marketing benefits of building green at NorthWest Crossing have been evident.

Aside from West Bend Property Company’s commitment to the environment and sustainable business, the marketing benefits of building green at NorthWest Crossing have been evident too. More home buyers are asking about the greenness of their homes and Northwest Crossing has EarthAdvantage certification and FSC-certified wood products to answer those questions and sell homes.

“We recognized about five years ago that green and sustainable business practices were an approaching wave,” said Mr. Ford, “now we believe if a business is not committed to green and sustainable business practices they will be left behind. The market will only continue to demand more sustainability.”





Introduction to Designing & Building with FSC

Most mixed-use, multi-family, or high occupancy housing projects are developed on a different timeline from single-family, remodeling projects or custom homes. Many of these large projects are more on a capital project time line that involve many professionals interacting and communicating during distinct project stages. For this type of project we believe that you should consult *Designing & Building with FSC*.

Designing & Building with FSC charts the connection from the FSC-certified forest products industry to the design and building industry. It is a tool to assist you in understanding the issues surrounding forestry today, and how as part of the green building community, you can use your purchases to drive positive change in our forests.

Download the *Designing & Building with FSC* guide (www.fscus.org/dandbwithfsc.org) and browse the Specifying, Building, and Accounting FSC Use section for guidance on appropriate steps, in various project design and construction phases, to ensure that FSC products make it to your project site.

Making it Happen: Residential Architects

Strategies for Making it Happen as a Residential Architect

Residential architects and designers are tasked with balancing the goals of their clients while designing a beautiful and practical building. Ideally, architects and designers introduce new ideas and materials to a project team that contribute to the project's green building goals. On a residential green building project these ideas and materials may include operable windows, a building orientated properly on the site, or use of FSC-certified wood.

This guide addresses large (mixed-use condominiums and multi-family) projects separately from small (custom home) projects as they can follow different avenues towards being built.

Multi-family and Mixed Use Projects

Large residential projects typically involve several stages including schematic design, design development, construction documents, and construction submittals. Each stage should provide ample time for research, project team meetings, specifications and even product testing. Once the project owner and design/construction team has set goals for the project, the schematic phase begins to layout how the project will be designed and which products will be included. This is a good stage to determine where wood products could be used and to research the availability of FSC-certified products for those building components.



As an architect you have the capacity to inform and influence your projects.

By following up with manufacturers and suppliers of FSC-certified products during design development, architects can further discuss estimated quantities, pricing, availability, delivery times, etc. These are all important questions to ask because FSC products are not always stocked at local material suppliers and sometimes they need to be ordered in advance to ensure that products arrive on time. Clear specifications, at the general and individual product level, should be written on a line-item



FSC products are not always stocked at local material suppliers and sometimes they need to be ordered in advance.

Photo Credit: Ryan Temple

basis to ensure that all those involved with the project further understand which products need to be purchased and used. To better communicate the need for specific FSC products provide the contact details for vendors that have met the FSC Chain-of-Custody (COC) criteria to the general and subcontractors.

To guarantee and document that FSC products are used, you will need to develop a submittal process. For more detailed strategies about the use of FSC products on large scale projects go to www.fscus.org/dandbwithfsc.org

Individual/Custom Homes and Remodels

An architect who is working on an individual or custom home may not need the structured stages that a large scale project requires and the transition between phases of the project may be more dependent on your client's discretion. Unlike large scale projects where there are several layers of professionals working on the same project, a smaller project can require less formal communication and more of a relationship between the architect and the client. Another element of working on smaller scale projects is that you may have more direct input into your customer/client's green goals. Whether you assisted the homeowner with developing the goals or you came in after they had a set project, they are going to look for you provide them with the best information to narrow down those goals to obtainable products and features. As the beacon of information you would be well served to understand FSC-certified wood, how you can find products in your market, and how you can help make more products available in your market.



Case Study: Green Urban Living in Arlington, VA



The Residence at Liberty Center is a new mixed-use development project.

Photo Credit: Ballston Investor Group LLC

The Residence at Liberty Center in Arlington, VA is self described as “exceptional urban living” surrounded by “the urban charms of brand-name shopping, excellent dining and flowing plazas.” This brand new mixed use project, developed by the Ballston Investor Group LLC and designed by The Smith Group, is another example of the growing trend toward urban living that is sweeping across North America.

The developers were very interested in offering high quality flooring products for the interior of the condos. Ecofinishes, a supplier of environmentally friendly floors in Alexandria, VA was brought in during the planning stage to provide some eco flooring options that could be used in the showroom of the condo building.

Danny Boyle, Vice President of Sales at ecofinishes, explains his first encounter with this project, “Though a green flooring option was not a requirement, it was very high on the “wants list” for the Shooshan Company. They of course wanted good looking, high performing flooring, at a competitive price, but they also wanted to know they were making an ecologically responsible choice. The strict standards that the FSC puts on its certificate holders put us in a very positive light. In the end, the developer selected several varieties of Ecotimber’s engineered flooring.”

Three shades and looks were selected, Patagonia Teak, North American Maple, and Stained North American Red Oak. As the project progressed the flooring was ordered and all the material was secured except for the Patagonia Teak. This product was currently unavailable because the area in South America where this FSC product is harvested from was experiencing its rainy season and according to the forestry practices in that region, little if any logging takes place during the rainy season. This is an important element to forestry in the tropics as logging activity during the rainy season can be extremely detrimental to soil stabilization and water quality as landslides are much more frequent.

However, in Arlington, VA, The Residence at Liberty Center had to continue construction so the FSC Patagonia Teak product was switched out for a non-certified product. When asked what could have been done to avoid losing the FSC Patagonia Teak to lead times, Danny replied, “Understanding your lead times on a project is always key, but when



Understanding your lead times on a project is always key.

Photo Credit: EcoTimber

working on a multi-family project with options it’s critical. It’s probably best if the general contractor and flooring subcontractor address this issue at their scope meeting.”

In the end the project is going to use 50,000 square feet of Ecotimber’s FSC-certified maple and stained red oak flooring. Plus, it is sending a signal to the market that FSC products are available if you take the time to research their availability and communicate the timing and delivery needs that all specialty products demand, FSC-certified or not.

Danny was also able to squash another misnomer in the market regarding FSC products, when asked if they were more expensive than non-certified products he responded with, “If you are comparing apples to apples on beauty and quality, the FSC products we have seen are competitively priced with non-certified when the other elements of the products are equal. So you don’t have to pay an arm and a leg for a good quality product that is beautiful and environmentally sound.”



Making it Happen: Homebuilders

Strategies for Making it Happen as a Homebuilder

In 2006, close to two million new homes were built in the United States averaging about 2,414 square feet in size, per home. Industry experts believe it takes about 15,000 board feet of softwood lumber to build homes close to the industry average size. By calculating these industry averages one can see that a significant amount of forest land is being logged to build new homes in the United States. Forest land is additionally impacted by the production of panel products such as softwood plywood, Oriented- Strand Board (OSB), etc.

The connection between building green homes and improving forestry is evident. Whether your company is working within the parameters of a green building standard and you simply want the credits from



Your wood purchases can positively contribute to better forestry practices.

building with FSC or the benefits in marketing the use of FSC building materials, you can be assured that the products you are building with come from industry leading forestry. And by building with FSC-certified wood you are rewarding those forest managers with market recognition for responsible forestry. Imagine, your wood purchases can positively contribute to better forestry practices and provide you with a market and brand advantage.

Like many of the new green products that have been coming to the market, FSC-certified wood products can be hard to find in certain regions of North America. However, this is only a matter of encouraging your suppliers to call manufacturers. One of the strengths of FSC certification is the Chain-of-Custody (COC), which tracks products from the log to the lumber in a house. Many pro-contractor lumberyards and wholesale distributors have not earned their COC certificate or investigated the possibility of bringing FSC products to their region because their customer base has not asked for it. Where this is viewed as

Locating FSC Products

Here are a few resources that will make locating FSC-certified products easier:

WWW.FINDFSC.ORG is a product inquiry form which you can fill out and it refers your product inquiry to hundreds of companies that make and sell FSC products.

WWW.CERTIFIEDWOOD.ORG is a large database full of manufacturers and products from several forest certification systems. Make sure you select the FSC designation in the 'Certification System' drop-down menu.

The Rainforest Alliance has developed several SmartGuides to assist with locating FSC-certified products, please look in the resources section of this book for the website.

WWW.GREENSPEC.COM is Building Green's premiere product information service, containing detailed listings for more than 2,000 environmentally preferable building products, including manufacturers and suppliers of FSC-certified products.

Photo Credit: Warm Springs Forest Products



Removing all the common road-blocks of bringing products to your market and project is the name of the game.

Photo Credit: Warm Springs Forest Products

a barrier to some, to others it is viewed as an opportunity to encourage suppliers to carry a FSC line of doors, lumber, panel products, flooring or other building materials. Building material suppliers are reluctant to carry products that are not asked for by customers and in the past few years many suppliers have resisted to stock FSC-certified wood products until their customers asked.

Convenient steps and strategies for bringing FSC-certified wood product to your region:

- Develop a list of building materials that are made of wood.
- Research manufacturers and suppliers of FSC wood products (www.findfsc.org).
- Negotiate and discuss with the manufacturers and suppliers the options for bringing specific FSC products to your region.
- Present a list of manufacturers and suppliers with FSC certificates to your local supplier for the appropriate products.
- Discuss with your supplier how you would like them to become familiar with these manufacturers and suppliers and begin to offer these products.
- Once specific FSC-certified building materials are found and your supplier (s) is on-board, provide training to sub-contractors on where to source FSC materials.
- Build with the FSC-certified products that are a good fit for your company so that you can meet sustainable business goals, green building standards, and marketing needs.

If the initial stage of this process is completed in advance of your project needing the products then you will have a better chance at keeping exorbitant premiums related to last second orders to a minimum. Plus, you may be able to work out better purchasing agreements if you can assure your supplier and the manufacturer that you will need estimated volumes on a regular basis. Removing all the common roadblocks of bringing products to your market and project is the name of the game. Get out ahead of the normal supply curve and you will be better off. Once the supply chain is built you will not have to go through these steps again as your supplier will be more than familiar with the available products.



Case Study: Christopherson Homes is Leading the Way in Northern California

“Our Company is built on the word ‘Responsible.’ This means that we want to be a responsible builder, responsible to the communities where we build, responsible to our customers, responsible to the environment, and responsible to our employees and shareholders.”

Kristi Paganini
Vice President of Product Design
at Christopherson Homes

Photo Credit: Christopherson Homes

Christopherson Homes was founded in 1978 by Keith and Brenda Christopherson, with the vision of building homes known for their extraordinary quality and design in highly desirable locations throughout Northern California. Since its inception, Christopherson Homes has built over 5,000 homes in some 50 communities in Sonoma, Napa, and Solano Counties.

With such a strong history in northern California it was no surprise that in 2001 Christopherson Homes embarked on a new business venture fueled by community interest and the City of Santa Rosa’s development of a green home checklist. Amy Christopherson-Bolton, the daughter of Keith and Brenda, was the catalyst for the company’s shift to green home building.

The initial motivation was obvious; if the homebuilder built homes according to the city’s green checklist they would have a faster permitting time and they would be answering the questions of potential buyers in the community. What was not obvious was that the green building practices implemented by the city’s checklist resulted in a better quality home.



Christopherson Homes has built over 5,000 homes in some 50 communities.

Kristi Paganini, Vice President of Product Design at Christopherson explains, “Our Company is built on the word ‘Responsible.’ This means that we want to be a responsible builder, responsible to the communities where we build, responsible to our customers, responsible to the environment, and responsible to our employees and shareholders. Once we realized that building green did not just give you that warm and fuzzy feeling, but that it also resulted in homes that were more energy efficient, improved indoor air quality, used forest products from well-managed forests, well they were just more responsible.”



The overall goal was to develop the necessary symbiosis in order to build homes and ensure that delivery would be efficient and on time.

Photo Credit: Christopherson Homes

By 2004, Christopherson Homes had integrated responsible/green building features into so many aspects of its business that it published its own set of minimum green standards that all Christopherson Homes would adhere to from then on. One of the most important components of building a green home or community is purchasing forest products that originate as trees in responsibly managed forests.

Christopherson Homes believed FSC-certified products would fit nicely into their green building features list due its credibility and acceptance by all green building standards. However, when Christopherson began to look into sourcing FSC-certified wood products for its homes it found that the FSC forest products industry was still being developed. This did not deter the homebuilder from working closely with its wood products supplier in finding solutions to the issues related to an FSC industry that is growing. Kristi can remember, “FSC wood was something that we were excited about but the supply chain had not totally matured in our market. The goal was to open a line of dialogue with our suppliers and the manufacturers of FSC products to improve the supply chain.”

The challenges that presented themselves with sourcing FSC-certified wood could not have been easily solved within the traditional parameters of today’s manufacturer to supplier to homebuilder relationship. This is because relationships are often based on holding information related to pricing, delivery, etc. close to the vest. A new business relationship dynamic was needed to break this old way of making products and delivering them to the market. The new business relationship involved Christopherson Homes, its wood supplier, and the manufacturers of FSC-certified products working closely together to ensure that each company in the manufacturing/supply chain knew what they could expect from the others. The overall goal was to develop the necessary symbiosis in order to build homes and ensure that delivery was efficient and on time.

Oak Hollow at Bennett Valley is a fifteen home community situated among the oak-crested peaks and rolling hills of Santa Rosa, CA. These bungalow, cottage and craftsmen style homes are one of several Christopherson communities offering a Green Features list that provides buyers with insights into all the green attributes of the homes. In addition, this community is being built with FSC-certified lumber and will meet the City of Santa Rosa’s Green Building Standards. To see the Green Features List go to: www.christophersonhomes.com

Making it Happen: Remodelers

Strategies for Making it Happen as a Remodeler

The home remodeling industry in the United States was responsible for over \$310 billion worth of products sold in 2006. Many Americans are already being good stewards of the planet by opting to improve an existing house over purchasing a new one. Thousands of remodeling contractors and millions of homeowners throughout the US have the opportunity to lead the industry toward greener practices if they first consider their design and material selections prior to beginning a remodeling project.

National and local green building organizations have struggled to develop guidelines and standards for the remodeling industry because projects are customized to the homeowner's desires. Standards do exist in some regions but in those regions with no standards resources are available for both professional remodelers and homeowners. By following the three simple rules of education, communication, and information you will ensure that everyone involved is on the same page regarding new green building techniques and FSC related project goals.



Consider design and material selections prior to breaking ground on a project.

Education

It all starts with educating yourself about green building design techniques, material selections, and resources (See Resources section of this guide). While learning about green material selections, it is a good idea to compile green related brochures and resources into a binder that you can share with your customer so that she or he can get a better idea of their options. Working with your supplier(s) to establish good relationships with manufacturers will further increase the reliability of your FSC product options.

“Incorporating green building materials and practices has the potential to be beneficial for your business and the environment at the same time. It is somewhat rare to find those two intertwined in such a way; why not see what benefits green building can have for you?”

Chris Donatelli
CR, CKBR of Donatelli-Castillo
Builders Inc.



On the Ground Impact

Will my home remodeling project or new home purchase really make a difference in the forest?

This question is commonly asked by homeowners or potential homebuyers. In response, the Rainforest Alliance has researched 129 companies in 21 countries that manage FSC-certified forests to determine the effectiveness of Forest Stewardship Council (FSC) certification.

As a result of FSC certification:

- Over 60% improved their worker safety and worker training programs.
- Over 60% improved the forested areas around rivers, wetlands and other waterways.
- Over 60% increased the monitoring of sensitive High Conservation Values Forests (HCVFs).
- Over 60% have better identified threatened and endangered species habitat.
- Over 50% have improved reforestation programs
- 50% have reduced the use of chemicals.

Even though many of these companies were practicing forestry according to their local, regional or national forestry laws, there was still significant room for improvement. Demanding FSC-certified products, no matter how large or small your project is, will send a signal to other forest products companies that society wants products to originate in forests that perform even better than local, regional or national laws say they have to.

Communication

Once you have a basic knowledge about what green building is and how to start the conversation with your customers, begin by asking them questions about their project and making sound suggestions based on your green remodeling knowledge. Inform them about the opportunity to use FSC-certified wood products, and explain what FSC means in the world of forestry and how it benefits our forest ecosystem and communities.

Information

In this day of high speed information, many customers may already understand green building and FSC-certified wood. These customers may require less information to get them started on a green project and they should be viewed as a valuable asset in your professional development because they are probably going to have well informed questions that will push your knowledge base. In addition, knowledgeable customers can work to your benefit as they may come to you with suggestions and offer to do some of the research themselves.

Regardless of whether you have a customer who is a total novice or one who is more knowledgeable regarding their green remodeling options, you are going to be required to work closely together to ensure that communication is clear and the availability of FSC products is researched. (See ‘Locating FSC Products’ sidebar)



Case Study: The Eggert's Go Green with a Conventional Budget



“We were amazed that FSC wood was not available locally. We did bring a truckload of wood down from the Twin Cities to demonstrate that there is a demand...and we knew that it came from sustainably managed forests, and that made all the difference”

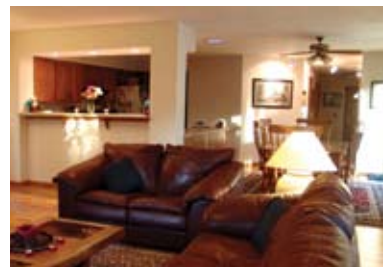
Tom Eggert
Homeowner

Photo Credits: Tom Eggert

The Eggert's are a classic American family with two parents, four children and two dogs, who all live in a 1960 style ranch home in Madison, WI. The family had outgrown the original design of their home and their goals for remodeling included a family room, a second bathroom, another bedroom, and a closet for Tom Eggert, the dad.

Crescendo Design, in Madison, WI, was chosen as the designer and their proposed remodel would add a total of 968 square feet split evenly between two floors. Many green design features were considered to improve air flow and energy use including the two story design which requires less energy to heat and cool than a single story.

After approving the design concepts, the Eggert's looked at various green building standards to help them make informed decisions about the greenness of their project. The Wisconsin Environmental Initiative's Green Built Home program was selected and the Eggert's initial goals were to earn 90 points while sticking to a conventional budget.



Points in the Green Built Home program could be earned by using FSC-certified lumber and plywood.

Through a list of contractors provided by the Green Built Home program, the family was led to Holly Schink Design Builders. Roger Schink provided the family with an acceptable bid and the two parties agreed to a contract that met the family's goals without specific language regarding the number of green building points. One wise decision on the part of both parties during the development of the contract was to insist that all 'change orders' need to be in writing to ensure that both parties understood what was happening and the implications. Points in the Green Built Home program could be earned by using FSC lumber and plywood, however FSC was not available in their market.



The total cost of the project was comparable to a traditional remodel on a dollars per square foot basis.

Photo Credit: Tom Eggert

Roger Schink and the Eggert's agreed to follow through with purchasing the FSC lumber and plywood, because it was inline with the greenness of their project. They purchased the lumber directly from an FSC distributor in Minnesota and had it trucked to Madison. They also hoped that their project would help create more demand for FSC wood products in the Madison, WI market. Tom Eggert said, “We hoped that by using FSC wood in our addition, it would become less risky for all of the home builders that would come after us.”

Several weeks of construction passed before the family had to finalize their decisions on flooring. Much debate within the family led them to select several flooring options that would accentuate different rooms in the house. FSC-certified maple was being stocked by a local flooring supplier and was used on the first floor. One challenge that was overcome through working with the flooring supplier was the application of hardwood floors over a radiant heating system. By explaining their concerns to their flooring supplier, the Eggert's were given enough assurance to move ahead with their selection.

In the end, the Eggert's exceeded their initial project goal of 90 points by scoring 149 points and the FSC-certified wood products contributed 18 points to the final tally. The total cost of the project was comparable to a traditional remodel on a dollars per square foot basis.

Tom explains the satisfaction of bringing FSC-certified wood to Madison, “We were amazed that FSC wood was not available locally. We did bring a truckload of wood down from the Twin Cities to demonstrate that there is a demand. Once the wood arrived, it looked just like any other wood that we could have used, but we knew that it came from sustainably managed forests, and that made all the difference.”



Making it Happen: Homeowners

Strategies for Making it Happen as a Homeowner

Homeowners are in charge of a number of decisions that are made regarding their newly constructed home or remodeling project. Essentially, it is the homeowner that is in the driver's seat because they are financing the project. If the homeowner is knowledgeable and motivated they can make some very responsible demands on the home building and remodeling industries.

Buying New Home Construction

Unfortunately, when buying a new home in a development many of the features, finishes, and designs have been pre-determined. Therefore, if you are interested in making green homes with FSC products available in a future neighborhood you may have to meet with the builders to explain the importance of their use of green building techniques and finishes, including FSC wood products. It would be best to meet with a builder early on in the process as many of the material selections decisions for production homes take place months before construction begins. A great place to discuss green building with homebuilders is in the show homes of current developments.

If you are buying a new home you may have limited green options unless you are willing to wait because both green building and FSC-certified wood products are market-based mechanisms that need to be driven by the demand, meaning you. Due to the newness of both of these efforts many homebuilders around the country are still becoming familiar with the terms green building, LEED for Homes, and Forest Stewardship Council (FSC) certified wood. However one thing is for sure: homebuilders nationwide are very interested in the views of a potential buyer and in this tighter housing market you may be successful in swaying a builder to the greener side. Do your homework to gain a baseline of green building information, including what FSC means, and head out on a Sunday to speak with homebuilders at their open houses. It will never happen unless you ask!

Home Building & Remodeling

As a homeowner embarking on a home building or remodeling project you have the power to select a design, the quality of craftsmanship, and

Cut out for suppliers:



Help Me Protect:

- Our Air
- Our Water
- Our Global Climate
- Our Natural Forests
- Our Biodiversity
- Our Wildlife

worldwide by buying Forest Stewardship Council (FSC) certified wood products.

Each purchase sends a message to the market that our community is part of the solution.

To inquire about bringing FSC-certified products to our market visit:

www.findfsc.org

the materials that meet your values and project goals. The first step in sourcing FSC-certified products for your project is to outline specific areas in your project where you would like to use wood.

Once you have developed a list of potential applications for wood use, you will need to research the availability of those products in your market. Three product characteristics that are usually assessed during research are pricing, availability, and quality. Due to FSC emergence as a new market, some of these characteristics may appear to be askew. The following provides some guidance to understand potential discrepancies:

Pricing – Not all FSC-certified products are more expensive based solely on their certification, and many factors can go into the additional expense. To learn how much FSC products cost in your market simply research the products on your list via the internet, local suppliers and manufacturers. As you learn more about specific products and their cost, note that on your FSC products list. Present this list to your hired professional as early on as possible, ideally during the initial meeting or prior to their bid. If your research and FSC product list, with prices, is presented prior to the professionals bid then they can actually work that price into their bid. This will give you a true estimate of the cost of the wood on your project.



Homebuilders nationwide are very interested in the views of a potential buyer.

Photo Credit: Warm Springs Forest Products

Availability – Since the demand is growing for FSC-certified products in all parts of North America, more products are becoming available in local markets. However, local suppliers and retailers still need to hear from customers that FSC products are in demand. Local retailers and suppliers are cautious about bringing new products into their market unless they are confident that customers will buy them. While you are researching the different FSC products inquire about the lead time that might be needed for specific FSC products. This information is important to communicate with your hired professional because the last thing that you want to do is to be forced to choose non-certified products in order to meet your project schedule.



A substantial amount of FSC-certified products are available at the manufacturing level and over the past three years the distribution and retail chains have been getting more involved to ensure products are available locally. Sometimes, however, you may have to make the decision to order FSC products from out of your region due to the fact that it is not available locally but by making your requests to local suppliers and manufacturers you have provided them with important information about where the market is shifting.

Quality – This is the hardest of the three characteristics to assess, due to the fact that poor quality products can become defective months or years after the project is complete. De-laminating plywood, twisting lumber, and cupped flooring are a few common complaints and can be present in certified and non-certified wood products. Ask FSC products suppliers and manufacturers about the longevity of their products, talk to others who have installed it, and read case studies.

Pricing, availability, and quality are all important factors when buying products and the recent emergence of ‘green’ products has been a fourth factor. If you do your research, ask questions, and communicate your needs clearly to your hired professional, your new home or remodeling project will meet your values and project goals. Good luck and have fun!!



Pricing, availability, and quality are all important factors when buying products.

Photo Credit: Jenny Horton

Case Study: The Horton’s Green Dream Rises from the Maryland Eastern Shore

Jenny and Tom Horton purchased their property with the vision of deconstructing the existing buildings and rebuilding a home that had cutting edge green building features while still giving them a Maine cottage feel. The goal was to use the existing foundation and footprint to build a new home that could meet their modern living standards and preserve the trees surrounding the old structures.

Initially the Horton’s thought that local big box retailers might carry FSC-certified building materials, as they had been reading for years about the commitments these retailers had made to purchasing FSC. However, due to the supply scale of the large big-box retailers in the US, they could not always provide FSC-certified products. And even though they had the benefit of speaking with some high level officials at one of the retail chains, delivery time was not going to fit within the constraints of their project.



The internet provided...a great deal of resources for finding FSC products

“In the end, we needed to bring products in from other parts of the country in an effort to spur the market in this area to purchase and stock FSC products. Surprisingly, the cost wasn’t all that much higher than local wood, even after transportation costs.”

Jenny Horton
Homeowner

Photo Credit: Jenny Horton

As it became clear that the established big box retailers were not going to be able to fill the Horton’s order, they began to look elsewhere for FSC-certified products. Jenny Horton remembers their initial research for FSC-certified products, “The internet provided us with a great deal of resources for finding FSC products, even though some of them were not immediately available in our market. In the end, we needed to bring products in from other parts of the country in an effort to spur the market in this area to purchase and stock FSC products. Surprisingly, the cost wasn’t all that much higher than local wood, even after transportation costs.”

Their contractor David Gooch, of David R. Gooch Home Improvements, was fully on board with the project and he was willing to help ensure that his customers were happy with the finished project. Jenny explains,

“Dave was great! He essentially trained most of the suppliers and sub-contractors on the green aspects. He kept the bar high - even though he had not previously undertaken a project of this sort he worked very closely with both of us, researching and trading information.”

As construction began, the Horton’s were pleased to see many of the green features that they desired going into their new house, including a composting toilet. More than 50% of the new wood products were FSC-certified including Spruce-Pine-Fir (SPF) dimensional lumber, ½” CDX plywood for sheathing, ¾” birch plywood for cabinets, exterior shingles for siding and tongue & groove (T&G) poplar for interior paneling. Dave can remember thinking, “Wow! These FSC-certified building products are excellent quality.”

The Horton’s house on the eastern shore of Maryland demonstrates that if using FSC-certified wood products to build your green home is a goal then you may need to go a little further than the common suppliers until the market for FSC products is fully established. However, success can be found in doing some additional research on product availability and by working closely with you hired professionals and suppliers. The market for FSC-certified products is in a state of constant growth and the more your local suppliers hear about your desire for FSC products, the more likely they will be made available.

Jenny describes how they were successful with a local supplier, “We ended up working extensively with Warren Woodworks, a building supplier in Easton, MD, who became interested in the challenge of sourcing materials for the project. The contractor and Warren’s staff worked closely with us in finding the best materials and weighing the trade-offs. Warren’s is now well-versed on the subject of green building and has been able to serve others on the Eastern Shore who are interested in green building.”



The FSC products in their house made up more than 50% of the new wood products used.

Photo Credit: Jenny Horton

Be Curious...About the Power of Market Transformation!

Market transformation is the transformation of an industry based on the demands of the market (i.e. public and private customers). Markets are the recipients of the products and services that industries produce. When the market demands better performance and accountability, the industry must transform to meet the market’s demand. For example, in the 1970’s the market demanded tighter rules governing the use and effectiveness of seat belts in automobiles. These demands led the automobile industry to improve the effectiveness of seat belts and to eventually develop airbags. Without the input and demands made by the market, the automobile industry may have resisted these upgrades.

Today, the market is concerned with a number of products and services that are produced by the agriculture, building, energy, automobile, clothing, and forest products industries to name a few. Market transformation initiatives in these industries include organic agriculture, green building, alternate energy sources, fuel efficient cars, organic/non-toxic fabrics, and certified forest products.

Due to the interconnections between industries it is powerful to have one market transformation initiative, such as green building, support and preference the leadership standard from another initiative. Through the Forest Stewardship Council’s (FSC) leadership and independent standards, FSC-certified products are the only certified forest products that are accepted by all residential and commercial green building standards in North America.

As one person you may feel powerless to change the huge and complex forest products supply chain, but in actuality businesses today are

listening to their customers more than ever, and your purchases hold significant power in communicating your values and desires to product providers. Market transformation related to forest products in the homebuilding and remodeling industry starts with your purchases at the cash register, by your contractor, or through a homebuilder.

Once you have investigated how FSC-certified forest products actually benefit society from a better managed forest to a greener building material, you will be well prepared to contribute to the transformation of the forest products industry through your building project. It all starts with one question to your homebuilder, remodeler, architect, or building material supply store: “Can we do this project with FSC wood products?”

It only takes a few seconds to ask the questions that could have positive impacts for centuries to come.

Good luck and may the forest be with you!!



Terry Campbell
Forest Products Solutions



Forest Stewardship Council (FSC) Resources

FSC Product Finders

BuildingGreen
Forest Certification Resource Center
Forest Stewardship Council (FSC)
Forest Stewardship Council (FSC) Canada

www.greenspec.com
www.certifiedwood.org
www.findfsc.org
www.fscanada.org/FindWoodProducts.htm#distributors
www.fsc-info.org

Forest Stewardship Council (FSC) International
Rainforest Alliance SmartGuides for FSC
Building Materials and Paper Products

www.rainforestalliance.org/programs/forestry/smartwood/find-certified-products.cfm

Why FSC?

Dovetail Partners' *A Land Managers Guide to FSC VS. SFI*
FERN *Footprints in the Forest*
Rainforest Alliance's *The Global Impacts of SmartWood Certification*

www.dovetailinc.org
www.fern.org/pubs/reports/footprints.pdf

Why FSC?
World Wildlife Fund/World Bank *Forest Certification Assessment Guide*

www.rainforest-alliance.org/forestry/documents/sw_impacts.pdf
www.whyfsc.com

www.assets.panda.org/downloads/fcagfinal.pdf

Periodical and Newsletters

Branching Out
Community Forestry Resource Center CFRC Connections
Dovetail Partners Inc.
Forest Stewardship Council US Newsletter
Forest Stewardship Council International
Metafore In Focus
Northwest Natural Resource Group
Southern Forests Network
World Wildlife Fund (WWF)

www.fscanada.org/news.htm
www.forestrycenter.org
www.dovetailinc.org
www.fscus.org
www.fsc.org/en/whats_new/news/news_notes
www.metafore.org
www.nnrg.org
www.southernsustainableforests.org
www.worldwildlife.org/news

FSC-accredited Certifiers in North America

Bureau Veritas
Scientific Certification Systems
SGS Qualifor
SmartWood
Soil Association

certification.us.bureauveritas.com
www.scscertified.com
www.ics.sgsna.com
www.smartwood.org
www.soilassociation.org

Green Building Resources

Residential Green Building and Remodeling Programs

Alameda County Waste Management Program (CA)
Alliance for Green Development (NM)
Alliance for Environmental Sustainability (MI)
Arlington County Green Home Choice Program (VA)
Build it Green (CA)
Build San Antonio Green (TX)
Built Green Canada
Built Green Colorado (CO)
Built Green King & Snohomish Co (WA)
Earth Advantage™ (OR)
EarthCraft House (GA)
Florida Green Building Coalition (FL)
Green Building Program (AZ)
Green Building Program (TX)
Green Homes NorthEast (MA)
GreenHOME, Inc. (DC)
Green Points Program (CO)
Vermont Builds Greener (VT)
Western NC Green Building Program (NC)
Wisconsin Green Built Home (WI)
USGBC LEED for Homes (National)

www.stopwaste.org/multigreen
www.greenalliancencm.org
www.alliancees.org
www.arlingtonva.us
www.builditgreen.org
www.buildsagreen.org
www.builtgreencanada.ca
www.builtgreen.org
www.builtgreen.net
www.earthadvantage.com
www.earthcrafthouse.com
www.floridagreenbuilding.org
www.scottsdaleaz.gov/greenbuilding
www.ci.austin.tx.us/greenbuilder
www.ghne.org
www.greenhome.org
www.ci.boulder.co.us/environmentalaffairs
www.bsr-vt.org
www.wncgbc.org
www.greenbuilthome.org
www.usgbc.org

Professional Organizations

Canadian Green Building Council (CaGBC)
National Association Homebuilders (NAHB)
National Association of the Remodeling Industry
Green Education Program
United States Green Building Council (USGBC)
World Green Building Council

www.cagbc.org
www.nahb.org/gbg

www.nari.org
www.usgbc.org
www.worldgbc.org

Educational Resources

Affordable Comfort Inc.
Building Green
City of Portland, OR Green Building Resources
Metro King Co Green Home Remodel
Oikos Green Building Source
The Energy and Environmental Building Association (EEBA)
Sustainable ABC.com
Sustainable Sources

www.affordablecomfort.org
www.buildinggreen.com
www.portlandonline.com/osd
www.metrokc.gov/dnrp/swd/greenbuilding/
www.oikos.com
www.eeba.org
www.sustainableabc.com
www.greenbuilder.com

Periodicals and Magazines

Ecological Home Ideas
Ecostructure
Environmental Design & Construction's Sustainable Home
Green Builder Magazine
Green Product Dealer
GreenSource
Natural Home Magazine

www.ecologicalhomeideas.com
www.eco-structure.com
www.edcmag.com
www.greenbuildermagazine.com
www.gbproductnews.com
www.greensource.construction.com
www.naturalhomemagazine.com



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www.hineslumber.com



www.loewen.com



www.columbiaforestproducts.com



www.vtindustries.com



www.westernwoodsinc.com



www.hardwoodsandplywoods.com



www.ecotimber.com



www.tembec.com



www.fairfaxlumber.com



www.buildersgreensource.com



www.rexlumber.com



www.potlatchcorp.com



www.wsfpi.com



www.collinswood.com



www.certifiedwoodproducts.net



www.parr.com



www.peerybros.com