

SUSTAINABLE BUILDING RESOURCES

Publications

A Primer on Sustainable Building

Excellent introduction to green building concepts and importance - easy to read; a good place to start. Offers useful discussion on sustainable building, including chapters on green building design, site selection, site development, building placement and configuration, the building envelope, energy use inside the building, conserving water, and building ecology.

Available through,

Rocky Mountain Institute
www.rmi.org

Sustainable Building Technical Manual

Helps designers, builders, owners, and operators of public and private facilities implement green strategies. Offers step-by-step guidelines for energy- and resource-efficient building during pre-design, design, construction, operations, and management.

Available through,

The U.S. Green Building Council :
www.usgbc.org

Green Building Advisor

Software program that identifies actions to reduce the environmental impacts of a building project, while ensuring healthy and productive indoor spaces. Includes 716 green building design strategies, 1,291 green building product listings as well as the full text to the Sustainable Building Technical Manual.

Available through,

Environmental Building News
www.buildinggreen.com

Sustainable Building Sourcebook

This 400-page document provides resources and information needed to better understand and implement green building practices and materials for homes that can be considered environmentally friendly - some aspects may be relevant to commercial buildings.

Available through,

Sustainable Sources
www.greenbuilder.com/sourcebook

HUD Rehabilitation Energy Guidelines for Multi-Family Dwellings

This guidebook explains how property owners rehabilitating multi-family buildings can increase energy efficiency and reduce costs. It discusses the issues and factors that determine how much energy a multi-family building will consume, including heat flow, air leakage, insulation, and heating and cooling systems. The guide also includes the specific HUD Rehabilitation Energy Guidelines for Multi-Family Dwellings with general and location-specific recommendations for Energy conservation improvements. These guidelines are followed by examples of typical energy conservation measures in different climates. Each of these examples includes a Multi-Family Cost-Effectiveness Worksheet to show the overall simple payback.

Available through HUD

Call 800-245-2691 to request a copy or go to www.huduser.org/publications/destech/multi.html

HUD Rehabilitation Energy Guidelines for One-to-Four Family Dwellings

This guidebook cuts through technical language to explain how owners of one-to-four family dwellings using HUD's popular Section 203(k) rehabilitation mortgage insurance, as well as other HUD programs, can increase the energy efficiency of residential properties. The guidebook explains recommended energy measures, conservation terms, and how energy conservation can be cost effective. It also offers Cost-Effectiveness Worksheets and software that can help property owners and remodelers determine the savings from proposed building envelope and equipment measures. Of particular interest is information on qualifying for Energy Efficiency Mortgages (EEM) offered on one- and two-unit houses by participating FHA lenders

nationwide. Recognizing that energy conservation measures can significantly lower utility bills and other operating costs for building owners, EEMs enable lenders to liberalize underwriting terms so that borrowers can finance 100 percent of the cost of energy improvements that are deemed "cost-effective" under the new guidelines.

Available through HUD

Call 800-245-2691 to request a copy or go to www.huduser.org/publications/destech/single.html

Inexpensive Strategies for Green Building

This very accessible article from Fine Homebuilding magazine provides details on integrating specific green features into the design of a house, in order to make green building affordable and practical.

It can be found at:

www.taunton.com/fh/features/design/greenbuilding/1.htm

GreenSpec: Product Directory and Guideline Specifications

The listings cover more than 200 categories and 1200 green building products carefully screened by the editors of *The Environmental Building News*, from access flooring to zero-VOC paints. The entries include product descriptions, environmental characteristics and considerations, as well as contact information with Internet addresses.

An in-depth description on the GreenSpec directory, as well as a sample product listing, can be found at:

www.greenspec.com

Websites

National Association of Home Builders Research Center

~ www.nahbrc.org

The research center was founded in 1964 as a separately incorporated, wholly-owned, not-for-profit subsidiary of the NAHB. The site has an impressive array of resources for green building, from great links to news to an “Ask an Expert” feature. Excellent site for builders.

Environmental Building News

~ www.buildinggreen.com

In addition to being the leading newsletter on environmentally responsible design and construction, the Environmental Building News’s Website site offers an impressive array of Green Building information, resources, products and services.

U.S. Green Building Council

~ www.usgbc.org

The USGBC has positioned itself as the building industry’s focal point for debate and action regarding its effects on the environment and the green building response. Excellent resources for builders, including the LEED Green Building Rating System™, a self-assessing system designed for rating new and existing commercial, institutional, and high-rise residential buildings for energy efficiency and overall environmental impact.

Center of Excellence for Sustainable Development, Green Buildings

~ www.sustainable.doe.gov/buildings/gbintro.htm

Perhaps the single best site to access green building resources on-line, be sure to check out the Affordable Housing Section.

National Center for Appropriate Technology, Resource Efficient Housing

~ www.ncat.org/reh

Excellent resource for Green multi-family housing projects, links to other green building sites.

Southface Energy Institute

~ www.southface.org

Works with nonprofit organizations to help make affordable housing more resource-efficient. Web site includes links to information on affordable housing, energy-efficient construction, and other topics.

The Partnership for Advancing Technology in Housing (PATH)

~ www.pathnet.org

PATH is a voluntary initiative that seeks to accelerate the creation and widespread use of advanced technologies to radically improve the quality, durability, environmental performance, energy efficiency, and affordability of our Nation’s housing. PATH links key agencies in the federal government with leaders from the home building, product manufacturing, insurance, financial and regulatory communities in a unique partnership focused on technological innovation in the American housing industry.

Oikos

~ www.oikos.com

A site devoted to serving professionals whose work promotes sustainable design and construction. Great source for up-to-date information on green products and materials

Office of Building Technology

~ www.eren.doe.gov/buildings

Wide array of resources for green building and energy efficiency, useful for everyone from educators to engineers.

Alliance for the Chesapeake Bay, Inc.

~ www.acb-online.org

The Alliance for the Chesapeake Bay is a regional nonprofit organization that builds and fosters partnerships for the restoration of the Bay and its rivers. Useful information provided includes the “Bayscapes Homeowners Guide to Designing Your Property.” Shows how to landscape beautifully in an environmentally friendly way.

Websites

Virginia Department of Mines, Minerals and Energy

-Energy Division

~ www.mme.state.va.us/De

The Division of Energy coordinates the implementation of energy management planning in Virginia. The site provides information about the State's numerous energy saving programs such as the Technical Assistance Grant Program and Energy Star Buildings Partnership

The American Institute of Architects

-Committee on the Environment (COTE)

~ www.e-architect.com/pia/cote

COTE works to create sustainable buildings and communities by advancing, disseminating and advocating environmental knowledge and values to the profession, industry and public. Excellent articles and papers concerning smart growth and green building.

Center for Resourceful Building Technology

~ www.crbt.org

A project of the National Center for Appropriate Technology, CRBT actively promotes resource efficiency in building design, materials selection and construction practices through research, education and demonstration, for which resources can be found on its site. Excellent for finding green building products.

Global Green USA

-The Resource Efficiency and Sustainable Communities for the Urban Environment (RESCUE) Program

~ www.globalgreen.org/programs/rescue.html

GG USA's RESCUE program has three primary initiatives, Greening Affordable Housing, Commercial Building Energy Efficiency, and Sustainable Building & Smart Growth. Among other resources, the site, has several useful publications listed.

Habitat for Humanity International

-Environmental Initiative

~ www.habitat.org/env

Habitat's Environmental Initiative promotes energy-efficient, environmentally friendly construction, encouraging good stewardship of natural resources and raising awareness of the environmental impact of house building. An excellent resource and potential partner for organizations wishing to build green and affordable housing.

Rocky Mountain Institute

-Buildings and Land

~ www.rmi.org/sitepages/pid13.asp

The Rocky Mountain Institute is an independent, non-profit research and educational foundation. The Buildings and Land category has resources for building and real estate professionals, such as green development consulting and publications, as well as consumer home resource efficiency information.

-Rebuild America

~ www.rebuild.org

Rebuild America is a program of the U.S. Department of Energy (DOE) that focuses on energy solutions as community solutions. Rebuild partners with communities to help them become more environmentally and economically sound through smarter energy use in buildings. They help communities identify problems, prioritize them and help solve them.

- Sustainable Building Resource

Directory for Virginia, Washington, DC and Maryland

~ www.sbrd.org

This site provides access to residential green architects, designers, builders, products, services, and other sustainable building resources and information for Virginia and the DC metro area. It is an excellent place to find local, green building resources. Local businesses involved in any of the aforementioned professions are encouraged to add their information to the site.

SUSTAINABILITY-MINDED VIRGINIA NON-PROFITS

ACCESS

1398 Cox Store Road, SW
Floyd, Va. 24091

Ph: (540) 745-3452

E-mail: pat@swva.net

Contact: Pat Therrien

Description:

ACCESS provides information, resource connections, and technical assistance on sustainable building techniques and projects. One recent ACCESS deconstruction/reconstruction project involved deconstructing an early 20th century home selected for demolition. ACCESS was successful in recovering and recycling the majority of the building's material from this project and then constructed a 12' by 16' office from the recovered material.

AMERICAN LUNG ASSOCIATION OF VIRGINIA

9221 Forrest Hill Ave
Richmond, Va. 23235

Ph: (804) 267-1900 **Fx:** 267-5634

Toll Free: (800) LUNG-USA

E-mail: chamm@lungva.org

Website: www.lungusa.org/virginia

Contact: Catherine G Hamm

Staff: 38

Description:

The American Lung Association of Virginia (ALAV) is devoted to improving the quality of the air we breathe. Toward this end, the association has been involved in several partnerships in Virginia to better educate the public about the issues surrounding indoor air quality.

In 1996, ALAV, Virginia Power, The Energy Consortium and Richard Collier Builders formed a partnership to construct an environmentally-friendly custom home that featured enhanced indoor air quality, improved energy efficiency, and sustainable building practices in the Richmond area. The "Come Home to Health" house was completed in September 1996 and featured in the annual Parade of Homes. Following this project, ALAV worked with Gabriel Enterprise in the Newport News area to construct a neighborhood of new, affordable homes featuring many of the same concepts found in the "Come Home to Health" project in a unique partnership with the local housing community and Fannie Mae Corporation.

ALAV has recently completed the construction of a new "Breathe Easy® Office" that features the latest innovations in indoor air quality technology, the use of environmentally-friendly construction materials, and construction techniques to reduce occupational hazards. The association is in the process of developing a plan book that will outline the concepts and design criteria for the Breathe Easy® Office to help promote these low-cost, reproducible techniques to commercial builders, other lung associations and the public across the country.

In June 2001, the American Lung Association of Virginia joined together with five Richmond area builders to create a healthy home tour June 2/3 and 9/10 in the greater Richmond metropolitan area. The new Come Home to Health homes by: Bain Waring Builders; R.E. Collier Inc. Builder; E. Wayne Norman Inc.; Smart Home Builders and J.R. Walker & Company are located in the counties of Chesterfield, Hanover, Henrico and New Kent and the city of Richmond.

The new Come Home to Health homes are being constructed using materials and technology that makes them not only extremely energy efficient, but enhances the quality of the indoor air. The homes will use many of the technological advances used in the American Lung Association of Virginia's Breathe Easy office building where the indoor air quality more than exceeds normal building air quality standards. The Come Home to Health building technology is beneficial to all homeowners, but is of particular interest to people with asthma, allergies or other respiratory problems.

APPALACHIAN REGIONAL RECYCLING CONSORTIUM

6580 Valley Center Drive, Box 21
Radford, Va. 24141

(540) 639-9314 • Fax: (540) 831-6093

E-mail: pat@swva.net

Web site: www.bev.net/pdc/arrc/arrc.html

Contact: Pat Therrien

Description:

ARRC conducts solid waste management and recycling support services, offers information, resource connections and technical assistance on green building projects, indoor air quality, deconstruction methods, procedures for recycling building materials, and code information.

APPALACHIAN SUSTAINABLE DEVELOPMENT

P.O. Box 791

Abingdon, Va. 24212

Ph: (540) 623-1121 **Fx:** 623-1353

E-mail: sfwp_asd@naxs.net

Contact: Anthony Flaccavento, Executive Director

Dennis Desmond, Program Manager for Sustainable Forestry
and Wood Products

Description:

The Appalachian Sustainable Development Initiative is a regional not for profit organization dedicated to creating community based, ecologically sustainable economic opportunities for Appalachian people. The organization operated the Sustainable Woods Processing Center, which purchases logs from sustainably managed forests, saws them into lumber and kiln dries the lumber in its solar and wood waste powered dry kiln. Sustainable Woods lumber is marketed to local wood product entrepreneurs for further processing into furniture, cabinetry, flooring and other millwork. ASD is promoting a Green Building Initiative, involving architects, designers, building contractors and woodworkers, to encourage the use of wood products from well-managed forests.

THE SOUTHEAST RURAL COMMUNITY ASSISTANCE PROJECT, INC.

145 Campbell Ave. SW, 8th Fl

P.O. Box 2868

Roanoke, VA. 24001-2868

Ph: (540) 345-1184 **Fx:** 342-2932

E-mail: vwp@sercap.org

Contact: Mary C. Terry, Executive Director

Operating Since: 1969 **Staff:** 35

Description:

The mission of the Southeast Rural Community Assistance Project, Inc. is to promote, cultivate, and encourage the development of water and waste water facilities to service low-income rural residents at affordable costs and to support other development activities, including housing and community economic development, which will improve the quality of life in rural areas. The agency operates 13 programs as well as providing comprehensive training and technical assistance. The following selected programs are representative of those SE-RCAP operates in Virginia.

The Southeast Rural Development Loan Fund was established to fill financing gaps in low-income communities with flexible, affordable low-interest loans for water and waste water development activities. In addition, loans may be utilized to fund pre-development, housing and economic development activities that often leads to increased access to Community Development Block Grant funds and RD programs.

The Indoor Plumbing and Rehabilitation Program provides indoor plumbing facilities and rehabilitation of substandard,

unsafe housing for low-income rural homeowners. Once again, Southeast RCAP was selected by the Department of Housing and Community Development to provide these services for the "balance of state", that is, in counties that are not served by other agencies.

The Virginia State Grants Appropriation for Operations Program provides training, technical assistance, and operations management services for low-income rural individuals and communities in accessing water/wastewater facilities. The Facilities Development Grants and Emergency Grants Program provides funding to low-income rural families and communities for water/wastewater facilities, upgrades, and repairs.

The Community Services Block Grant Program provides program and operating costs for the provision of training and technical assistance to low-income rural residents to enable them to access safe drinking water and sanitary means of waste water disposal at an affordable cost. The program helps to increase the capacity of rural communities and individuals to ensure environmental quality for today and the future. In addition, the program addresses the needs and advocacy issues of rural housing and community economic development through training and technical assistance.

Community Leadership Development is a capacity-building program focused on empowering rural residents to impact changes in their communities. Training programs are designed for rural, community-based organizations, community, local elected officials, community action agencies, state government networks, and other organizations concentrating on rural issues.

Volunteers for Communities trains low-income communities to identify and prioritize needs and to host predominately students in long and short-term volunteer experiences designed to assist the communities in meeting their identified needs. The program then matches volunteer groups with the trained communities to complete the work. Cultural sharing in the evening is one benefit of the experience.

VIRGINIA HOUSING AND THE ENVIRONMENT NETWORK

P.O. Box 6539

Arlington, Va. 22206

Ph: (703) 486-2966 **Fx:** 920-0673

E-mail: osso@mindspring.com

Website: www.vahen.org

Contact: Annette Osso, Executive Director

Description:

Virginia Housing and the Environment Network (VaHEN) is the first statewide organization that brings together representatives from diverse sectors who are interested in building healthy, environmentally friendly buildings and sustainable communities. VaHEN was incorporated as a non-profit (501-c-3) organization in 1995, when a group of individuals, who represent housing, banking, utility, construction, government, and environmental interests, set out to develop a program for VaHEN that changes the way homes, buildings, and communities are built in the Commonwealth.

VaHEN's mission is to promote environmentally sound building and development practices for Virginia's current and future generations. To accomplish its mission, VaHEN organizes events and training around the state and region. VaHEN provides information and education on building methods, materials, and designs that save energy costs, reduce waste and promote recycling, reduce environmental impacts and exposure to unhealthy substances, strengthen local economies, and contribute to an enhanced quality of life. It is developing an organized information clearinghouse and resource directory and serves as a regional networking organization.

VaHEN has planned the following activities for 2001-2002

- Virginia Rebuild America Program
- Virginia Building America Program
- Green and Affordable Housing Workshops
- Regional Sustainable Community Forums
- Sustainable Building Resource Directory

The VaHEN Website: www.vahen.org contains information on dates and locations of events and additional information on the Virginia Rebuild and Building America programs. You can also enter your organization or company's name into the Sustainable Building Resource Directory through the VaHEN website.

Accomplishments"

Virginia Housing and the Environment Network sponsors workshops and presentations for a wide range of audiences, provides technical assistance for design and construction of residential and commercial buildings, and organizes regional and state-wide conferences. Examples of these events are listed below.

-Green Building & Sustainable Development Workshops

-Green Development Workshops. Held in Fredericksburg, VA; Catonsville, MD; and Harrisburg, PA for developers, builders, and local governments. These workshops presented information on incorporating environmental considerations to create better buildings and more profitable real-estate developments.

-Affordable Housing/Livable Communities Workshops. Held in Hampton Roads and Lynchburg, VA for affordable housing organizations, builders, and local governments. These workshops brought together issues of community and economic development, affordable housing, and environmental stewardship for community and government representatives.

-Training and presentations for builders, affordable housing providers, architects, and project managers on Green Building concepts and practices.

-Virginia Building America Program: US DOE's Program to Support Energy Efficiency in Residential Construction. Held in Richmond for builders and architects. This workshop, held in conjunction with the VSFII Conference, introduced builders to the Building America Program's goals of increasing energy efficiency, reducing construction costs, and producing high-quality housing.

-High Performance Schools: U.S. DOE's EnergySmart Schools and Rebuild America Programs. Held in Richmond for school facility managers and local government representatives. This workshop, held in conjunction with the VSF II Conference, provided national and regional examples of

school systems that are constructing and renovating facilities to reduce energy and water use, utilize solar energy, and integrate energy upgrades into school curricula.

-LEED™ and Green Building Design Tools. Held in Richmond for architects. This workshop, held in conjunction with the VSF II Conference, introduced the design community to LEED™ basics and provided a case study of a Virginia project being designed to LEED™ standards.

-Green and Affordable Workshop Series, co-sponsored with Virginia Housing Coalition. Held in Richmond, Blacksburg, and Arlington County for affordable housing providers, local government, builders, financial organizations, and weatherization professionals. This series combined case studies of successful Green and Affordable projects around the state, with training on Green Building practices, examples of multi-family rehab projects, and information on financing of projects.

-Technical assistance for Green Building projects

-Provided Green Building technical assistance and pre-construction training for the project manager, general contractor, architect, and subcontractors for the Winchester Greens project of the Better Housing Coalition, a Richmond-area affordable housing developer.

-Provided a pre-construction training workshop for the GreenHOME volunteer construction crew, in cooperation with the Washington, D. C. Habitat for Humanity.

-Consumer-oriented presentations and displays

-A Speaker Series, cosponsored with the Potomac Overlook Regional Park (Arlington, VA), that included presentations on Energy Efficiency, Landscaping, Healthy Homes, and Solar Homes

-An exhibit at the Association of Energy Conservation Professionals Energy Fair at Virginia Tech

Conferences:

-The first Virginia's Sustainable Future Conference was held June 16-18, 1999 in Richmond. The Conference was co-sponsored with VA Department of Environmental Quality, VA Housing Development Authority, VA Department of Housing and Community Development, and other state agencies and private businesses. Over 450 participants from the business, government, and community sectors; national and local speakers; and 40 exhibitors attended the conference.

-The second state-wide conference - Virginia's Sustainable Future II Conference - took place June 6-8, 2001. Conference co-sponsors included VA DEQ, VHDA, VA Department of Conservation and Recreation and VA Department of Mines, Minerals, and Energy. This successful conference attracted over 425 attendees and 50 exhibitors. In addition, over 200 participants attended pre-conference events. Visit the VaHEN website (www.vahen.org) for more information on the conference, including presentations by national and local experts.

-The first Regional Sustainability Forum in Hampton Roads was held in May 5, 2000, co-sponsored with the Hampton Roads Sustainable Communities group and other public and private sponsors. This regional conference brought together state government representatives with local community, environmental, development, and business representatives to explore sustainable development options in the Hampton Roads area.