

Brownfields and Sustainability

Brownfields revitalization returns abandoned or underutilized properties to productive use, cleans up the environment, creates jobs, and strengthens the social fabric of communities. Although many brownfields redevelopment projects have sustainable elements, opportunities exist to make even greater strides in sustainable brownfields redevelopment. This guide provides resources and contacts for those communities interested in redeveloping their brownfield properties in environmentally sound, economically competitive, and socially responsible ways.

BROWNFIELDS

Brownfields are real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant.

GREEN BUILDING

Green or sustainable building is the practice of creating healthier and more resource-efficient models of construction, renovation, operation, maintenance and demolition.



Chicago Center for Green Technology

Built on a former illegal dump in Chicago, Illinois, the Chicago Center for Green Technology meets the highest standards for **green building**; it used the latest in green technology to earn a Leadership in Environmental and Energy Design (LEED) platinum designation. This 34,000-square-foot building includes 36 percent recycled or renewable materials, has a “green” vegetated roof, and collects and reuses rain water onsite. Its energy-saving building components and mechanical systems use 48 percent less energy than conventional construction. The Center supports **green economies** by housing tenants and programs that are dedicated to sustainability, and provide “green” jobs to the local community. They include a manufacturer of solar panels, an urban landscape company, and a community landscaping and job training program.

GREEN ECONOMIES

Green economies support healthy ecosystems and communities. They push the boundaries of technological innovation to produce services and products without degrading water, land or air quality. They cultivate local workforces and raise awareness of sustainable choices consumers can make to improve the environment.

Resources

EPA cannot attest to the accuracy of information provided by the organizations listed and/or their respective Web site(s). Providing Web addresses to a non-EPA Web site does not constitute an endorsement by EPA or any of its employees of the sponsors of the site or the information or products presented on the site.

Federal Programs

Many federal agencies recognize the importance of sustainability and have made a commitment to it by sponsoring or designing programs to promote sustainable communities.

- **Solar and Geothermal Business Energy Tax Credit** (www.mdv-seia.org/federal_incentives.htm) – allows a 10 percent tax credit on qualified solar energy property
- **The Whole Building Design Guide** (www.wbdg.org) – a multi-agency sponsored site providing resources for planning, siting, designing, constructing, operating and maintaining high-performance and sustainable buildings. Includes resources like the Federal Green Construction Guide for Specifiers – a set of over 60 ‘greened’ guide specification sections (fedgreenspecs.wbdg.org)
- **Department of Energy (DOE)**
 - **Office of Energy Efficiency and Renewable Energy** (www.eere.energy.gov) – provides information about renewable energy and energy efficiency; in particular the Building Technologies section provides a host of useful links to information and resources from DOE’s building programs
 - **Building America Program** (www.buildingamerica.gov) – sets standards for home builders, provides technical assistance and builder training programs
 - **Rebuild America** (www.rebuild.gov) – provides technical assistance tools, resources, and services on energy efficiency and renewable energy technologies
 - **National Renewable Energy Laboratory** (www.nrel.gov) – a national laboratory, conducts research in energy efficiency and renewable energy
- **Environmental Protection Agency (EPA)**
 - **Smart Growth Program** (www.epa.gov/smartgrowth) – extensive resource on smart growth, highlighting successful policies and projects from across the country and providing links to other resources
 - **Collaborative Science and Technology Network For Sustainability** (<http://es.epa.gov/ncer/cns/>) – provides grants for innovative regional projects that apply science in decision-making to address sustainability issues
 - **Green Building Programs** (www.epa.gov/greenbuilding) – provides links to relevant EPA programs, offers statistics on the impacts of green building and a listing of federal, state and local green building funding opportunities
 - **ENERGY STAR** (www.energystar.gov) – offers tools and resources to reduce energy consumption in homes and businesses
 - **Clean Energy Programs** (<http://epa.gov/cleanenergy/index.htm>) – provides information and technical assistance on Clean Energy options – EPA Clean Energy-Environment State Partnership Guide to Action (<http://epa.gov/cleanenergy/stateandlocal/guidetoaction.htm>)
 - **Brownfields Program** (www.epa.gov/brownfields) provides grants and technical support for brownfields assessment and cleanup
- **National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management** (www.ocrm.nos.noaa.gov/pcd/communities.html) – addresses sustainability in coastal communities
- **Federal Transit Administration’s Livable Communities Initiative** (www.fta.dot.gov/11460_11463_ENG_HTML.htm) – Livable Communities Program
- **Federal Highway Administration’s Transportation, Community and System Preservation Pilot Program** (www.fhwa.dot.gov/tcsp) – provides grants for projects that integrate transportation, community and system preservation plans and practices
- **Department of Housing and Urban Development** (www.hud.gov) – provides grants and tax credits for affordable housing
- **Department of Treasury** (www.cdfifund.gov) – New Markets Tax Credit Program

- **National Parks Service** (www.cr.nps.gov/hps/tps/tax) – Federal Historic Preservation Tax Incentives Program

National Programs

Besides federal government support, there are many nationwide private and nonprofit organizations promoting sustainable principles in local communities.

- **Sustainable Communities Network*** (www.sustainable.org) – links citizens to resources and to one another to support and build sustainable communities
- **Smart Growth Network*** (www.smartgrowth.org/sgn/default.asp) – provides extensive information on resources, strategies and best practices for smart growth and sustainable development
- **U.S. Green Building Council’s (USGBC) LEED Program*** (www.usgbc.org) – provides green building standards
- **Groundwork USA** (www.groundworkusa.net) – network of independent, nonprofit environmental businesses called Groundwork Trusts that work with local communities to promote sustainable projects
- **GreenInfrastructure.net*** (www.greeninfrastructure.net) – provides extensive information and case studies on how to implement smart conservation programs by identifying and protecting critical green infrastructure
- **Smart Communities Network*** (www.smartcommunities.ncat.org) – developed by the National Center for Appropriate Technology, provides examples of successful sustainable community projects, model codes and ordinances, technical and financial resources
- **National Association of Home Builders*** (www.nahb.org) – provides information on sustainable building and a guide for green homes
- **Form-based Codes Institute (FBCI)** (www.formbasedcodes.org) – Web site created by the FBCI, an alliance of form-based coding practitioners who set standards for and disseminate information about the code technique
- **National Charrette Institute** (www.charretteinstitute.org) – provides training and resources for conducting a charrette, a planning tool used to design a common vision for what sustainability means for a community

SMART GROWTH

Smart growth is development that revitalizes neighborhoods, protects working lands and open space, keeps housing affordable, and provides more transportation choices. It is development that is good for the economy, community and environment.

Atlantic Station

Atlantic Station, located in Midtown Atlanta, Georgia employed **smart growth** principles to create a live-work-play development on the site of a 138-acre former steel mill. Its pedestrian-friendly neighborhoods and mix of residential, retail, office and recreational uses allow residents to walk to restaurants and entertainment and use mass transit or walk to work.



- **Building Codes Assistance Project*** (www.bcap-energy.org) – works to save energy in homes and buildings by promoting the adoption and implementation of building energy codes; provides free assistance to states and municipalities
- **Natural Resources Defense Council** – Cities and Green Living (www.nrdc.org/cities/default.asp) – provides strategies for making cities more healthy and livable
- **Rocky Mountain Institute** (www.rmi.org) – provides resources for green development and energy efficiency
- **Home Depot Foundation** (www.homedepotfoundation.org) – provides environmental grants to encourage green building and sustainable design in affordable housing
- **The Energy Foundation** (www.ef.org) – provides grants for research on energy efficiency and renewable energy to nonprofit organizations
- **The Kresge Foundation** (www.kresge.org) – Green Building Initiative offers educational resources and grants to help nonprofits during the planning phase
- **Rain Forest Alliance** (www.rainforest-alliance.org/greenbuilding) – SmartGuide to Green Building and Wood Sources
- **EcolQ.com** (www.ecoiq.com) – provides media and educational products and services; focuses on the strategies, tactics and tools needed by leaders, educators and advocates working for sustainability

GREEN INFRASTRUCTURE

Green infrastructure is the interconnected network of greenspace, forests, waterways and wetlands providing the ecosystem services fundamental to human health and biodiversity. It supports native species, maintains and repairs natural ecological processes, and sustains air and water resources.

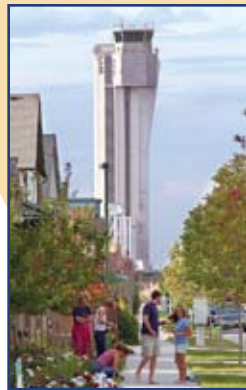
East Gainesville Depot Park

In Gainesville, Florida, the East Gainesville Depot Park Project is transforming a former rail yard and industrial area into a community park. At completion, it will include walking paths and boardwalks, a restored historic train depot, playgrounds, an amphitheater, a skate park, and a bird sanctuary. Native vegetation will be planted to recreate the natural wetland landscape, supporting the city's **green infrastructure**. Two constructed ponds will naturally treat runoff from city streets, reducing contaminants entering Paynes Prairie Preserve State Park. This collaborative effort ties together



environmental restoration, development of rail trails, historic preservation, and infrastructure improvements to encourage community revitalization in Gainesville.

Stapleton



At the site of Denver, Colorado's former Stapleton International Airport, the first phase of a 4,700-acre mixed-use redevelopment effort incorporates **smart growth** and **green building** design. Guided by the Stapleton Sustainability Master Plan, the project emphasizes diverse housing, a walkable community, public transportation, energy efficiency, recycling, green building practices, water conservation, and environmental cleanup. For example, homes must meet federal ENERGY STAR requirements and minimize water use. In addition, 1,100 acres of concrete from the site's runway was recycled for use in local construction projects. Stapleton is also a good example of **green infrastructure** where the formerly buried Westerly Creek will be daylighted as part of the project. This will help refurbish natural habitat while providing an amenity to future homeowners.

Regional/State/Local Programs

Because community redevelopment and sustainability are in large part a local issue, a number of communities have developed their own programs with grants, guides and other resources that are tailored to their particular area. These resources represent just a few of these types of programs. For more information in your area, start by contacting your state Environmental Protection Agency or its equivalent and your local planning, economic development, and environmental agencies.

- **NextStep** (www.nextstep.state.mn.us) – Web site for the Minnesota Sustainable Communities Network sponsored by the Minnesota Pollution Control Agency; provides opportunities for networking, information exchange, and access to assistance for those in Minnesota interested in sustainability
- **Green Communities Demonstration Grant Program** (www.epa.state.il.us/p2/green-communities) – Illinois EPA-sponsored grant program that provides grants to communities to support community-visioning processes when addressing local environmental issues
- **Sustainable Oregon** (www.sustainableoregon.net) – provides case studies, event listings, and the latest news on sustainability in Oregon, including developments in state government and local initiatives
- **Virginia Sustainable Building Network** (www.vsbnet.org) – statewide organization that brings together proponents of green buildings and sustainable communities; provides green building events, training and technical assistance on green building design, and a clearinghouse and resource directory
- **Built Green Colorado** (www.builtgreen.org) – a statewide voluntary program that encourages homebuilders to use technologies, products and practices that promote sustainability
- **Xcel Energy Design Assistance** (www.xcelenergy.com) – provides technical assistance in ten Western and Midwestern states for designing a new facility or constructing additions or renovations with efficiency in mind to lower energy bills; provides rebates and cash incentives

* Web sites with an asterisk provide additional information and contacts for regional, state, and local sustainable resources.

For additional information on sustainable reuse of brownfields, contact:
EPA's Office of Brownfields Cleanup and Redevelopment (OBCR)
(202) 566-2777
www.epa.gov/brownfields



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Sustainable Reuse of Brownfields

Resources for Communities

