



SUSTAINABILITY AND GREEN INITIATIVES

Green Initiatives: Complement LEED Certified Buildings with these Eco-friendly Practices

by Lisa Gibbs, Ed D.

The Industrial Revolution, which spans from the 1760s through the early 1900s, brought major technological changes to the planet. The shift from small-scale farming, handmade goods, and travel by horse and foot to mass food production, manufacturing, and locomotives greatly increased accessibility for products and ease of movement around the vast United States and across the globe. However, environmental pollution and disruptions of the landscape are continued nasty side effects. Coal burning factories, steam engines, and internal combustion cars produced dense smog in many early 20th century cities and continue to pollute today. Railways, dirt or cobblestone roads, and city construction have resulted in the loss of forests, prairies, and other natural landscapes.

People concerned with pollution, nature conservation, and wildlife protection formed groups to bring awareness to the issues caused by the Industrial Revolution. In 1905, the United States established the US Forest Service and began designating national wilderness areas. “Green” political movements became more numerous in the 1950s and 60s, and in 1963 the Clean Air Act became law. The act empowered federal and state agencies to research and regulate air pollution. Several later updates to the act—along with the founding legislation of the Environmental Protection Agency—resulted in comprehensive air-quality standards for the U.S.; National emissions dropped 63% between 1980 and 2015 thanks to these policies.

Moving into the 21st century, efforts toward cleaner air, water, and land conservation have become more and more prolific. Private colleges and universities are now microcosms of initiatives that are successful in reducing the carbon footprint of campuses across the country. One major effort, LEED certification, has become the gold standard for new construction and renovations; however, there are other changes campuses have made that complement this eco-friendly construction.

Wind-Generated Electricity

Naropa University in Boulder, Colorado is committed to using 100% renewable energy. Much of that energy is harnessed from wind turbines. Xcel Energy Inc., a utility holding company operating in Colorado and other Midwest states, allows customers to voluntarily choose how much of their power is received from wind energy. According to the company website, Windsource subscriptions are available in 100kilowatt-hour blocks for a small additional cost. Since 1998, Naropa has been purchasing these Renewable Energy Credits (RECs) to power the campus, supporting wind energy development and production.

Geothermal Energy

Geothermal energy techniques tap into the reservoirs of hot water found at various depths below the surface of the Earth. This energy source produces

consistent power around the clock, and the closed-loop plants emit no greenhouse gases. They use less land than coal, wind, or solar energy plants, and the rate of energy extraction can be balanced with a reservoir's natural flow. Grinnell College in Grinnell, Iowa, drilled wells 120 feet in order to harness the steam and extremely hot water now used to heat and cool the Environmental Education Center in the Conrad Environmental Research Area. The campus currently has four geothermal systems in place and plans to eventually heat and cool the entire campus in this manner, replacing the boiler and chiller plants that rely on fossil fuel energy.

Zero-Landfill

John Brown University (JBU) in Siloam Springs, Arkansas, became and continues to be the first and only zero-landfill campus in Arkansas. In 2012, the campus put in place numerous methods of keeping waste out of landfills. As their website states, "45% of JBU's waste is recycled, and the rest is compacted and incinerated." All dumpsters were removed from campus and replaced with recycling

bins and trash cans in nearly every campus space, resulting in nearly 100% of classroom and office paper, cardboard, and most plastics being recycled. The Salvation Army arrives during move-out days to collect reusable items discarded by students. Compacted non-food items are incinerated in a power plant that does not release harmful emissions. Food waste is taken to a nearby zoo, and kitchen grease is converted to biodiesel, then used to power landscaping equipment.

JBU partners with off-campus entities to recycle as much as possible. The City of Siloam Springs receives paper, cardboard, most plastics, glass, and pallets in exchange for the containers used on campus to collect such materials. Salvage metal is sold to metal recycling companies in the city. Plastic bags are taken to grocery stores that recycle used bags. Electronic waste is recycled by eSCO, a "full-service electronics recycling and asset recovery firm with a zero electronic waste landfill policy." These initiatives have resulted in hundreds of thousands of dollars in savings for the campus in addition to the positive effects on the environment.

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At Kenyon College in Gambier, Ohio, nearly 45% of food served in the dining hall is grown within a 40-mile radius of the campus. This return to locally grown food, as opposed to the highly processed food that came from the Industrial Revolution, improves access to healthy, organic options and connects the campus with the local economy and community.

Agriculture

At Kenyon College in Gambier, Ohio, nearly 45% of food served in the dining hall is grown within a 40-mile radius of the campus. This return to locally grown food, as opposed to the highly processed food that came from the Industrial Revolution, improves access to healthy, organic options and connects the campus with the local economy and community. In addition, the campus includes Kenyon Farm, a 10-acre plot where students manage the care of farm animals and the growing and harvesting of crops. Students can live in the house on the farm and complete coursework while also tending to the daily work it takes to run a successful farm. Coursework from various disciplines—biology, economics, and environmental studies—uses the farm to explore topics such as conservation, resource allocation, and permaculture.

Aldo Leopold, who in 1924 was instrumental in the designation of Gila National Forest as the first national wilderness area

in the US, encouraged people to be citizens rather than conquerors of the land. The efforts outlined above by these institutions demonstrate a return to this type of human stewardship of the environment. Additional practices that complement LEED certified construction include composting, using green cleaning products, bicycles for transportation, low-flow shower heads, motion-sensor lights, and water bottle filling stations. The eco-friendly changes taking place in the microcosms of higher education demonstrate that the larger community can adopt and participate in such practices.



ABOUT THE AUTHOR: PUPN staff writer Lisa Gibbs earned her Ed.D. in Higher Education Administration in 2018. She is an advocate for arts, particularly dance, in education and for increasing the financial well-being of artists through financial education.



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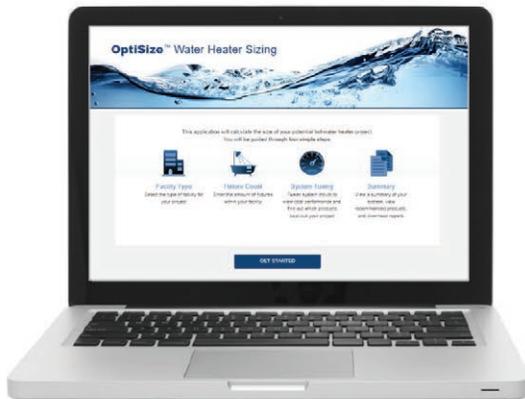


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