



NGRREC Field Station Certified Gold LEED by USGBC

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ALTON – The National Great Rivers Research and Education Center is officially the gold standard in sustainable building.

Its **Jerry F. Costello Confluence Field Station** was recently awarded **LEED®** (Leadership in Energy and Environmental Design) Gold Certification by the U.S. Green Building Council.

“This particular research facility is a very complex structure,” said Dale Chapman, NGRREC board chair and president of Lewis and Clark Community College. “To receive Gold level LEED® Certification for such a complex building added challenges. It is great to have this national organization affirm that we have achieved construction, operation and sustainability goals at the highest levels.”

LEED® is a green building certification program that recognizes best-in-class building strategies and practices, according to usbgc.org. To receive LEED® certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. LEED® is generally recognized as the preeminent organization for green building certification.

NGRREC applied for a possible 46 points, including points for its water conservation systems, vegetated roof, renewable energy production and energy saving measures, such as solar panels and high efficiency heating and cooling system, as well as the use of all native landscaping on the site. The project earned 45.

“Buildings are a prime example of how human systems integrate with natural systems,” said Rick Fedrizzi, CEO and founding chair, USGBC. “The National Great Rivers Research and Education Center project efficiently uses our natural resources and makes an immediate, positive impact on our planet, which will tremendously benefit future generations to come.”

The Field Station was built using green technologies and construction techniques in accordance with LEED® certification standards.

It features the use of passive solar light collectors in many of the offices and laboratories to supplement electric lights. The sun’s energy is also used for heating the building’s water. Water conservation measures in the facility include onsite greywater treatment that uses man-made wetlands for water filtering. Additionally, the building's living green roof creates habitat for plants and animals, and also collects and stores any rainwater that falls on the building, eliminating runoff. A river water supply pipeline enables researchers to pump river water directly into their wet labs and large raceways, called mesocosms that mimic some river conditions for experimental use.

“Being an organization that is focused at its heart on sustainability of rivers and water, we are particularly proud of the green features that are incorporated into this building,” said Ted Kratschmer, Field Station Manager. “Of course, the water conservation measures were of particular concern, but the energy saving measures are equally important, as water and energy production are closely linked.”

Energy efficiency is optimized in the building's chilled water-cooling system (supplemented by river water and ice storage tanks in the summer), and heat recovery wheel (exchanges heat from intake and exhaust air, recovering energy that would otherwise be lost), reducing grid energy needs and costs. Recycled materials are employed throughout the building's construction including:

1. Rebar in the concrete
2. Metal studs
3. Rubber floor tiles
4. Countertops
5. Bathroom floor and wall tiles
6. Insulation made from recycled newspaper and paper
7. 90% of construction-related waste has been recycled

AAIC, Inc. was the building's architect and BRiC Partnership, LLC were consulting engineers on the project.

“The measures taken to reduce energy consumption represent a responsible disposition on behalf of the college, not only with respect to its goals and objectives, but to future generations of students and the community at large,” said Tom Buchheit, of BRiC Partnership, LLC. “The trackable solar arrays alone, at certain times of the year, offset 50 percent of the building's electrical demand. This is stewardship at its best. The college should be very proud of what it has accomplished: a beautiful building, a comfortable environment, and a showcase for responsible citizenry.”

Achieving LEED® Gold Certification is a process that took several years to realize, and is a credit to the vision of the NGRREC Board of Leadership and Advisory Board, said Nate Keener, L&C's director of Sustainability.

“We have long been educating visitors to NGRREC about the numerous sustainable features employed in the building's construction, and this announcement validates the hard work that went in to turning the vision into reality,” Keener said.

Learn more about NGRREC and the Jerry F. Costello Confluence Field Station at www.ngrrrec.org. Learn about the USGBC at www.usgbc.org.