

Landscape Ecology on College Campuses to Promote Environmental Sustainability

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Landscape Ecology is defined as heterogeneous areas repeated in form throughout. Structure, Function and Change define landscapes and areas consist of the matrix, patches and corridors arranged in a land mosaic. To direct change, we need to “Think Globally, Plan Regionally and Act Locally” (Forman p. 480).

Sustainability is defined as one in which there is stability...achieved through meeting the needs of the present without compromising the ability of future generations to meet their own needs” (Forman, p. 483).

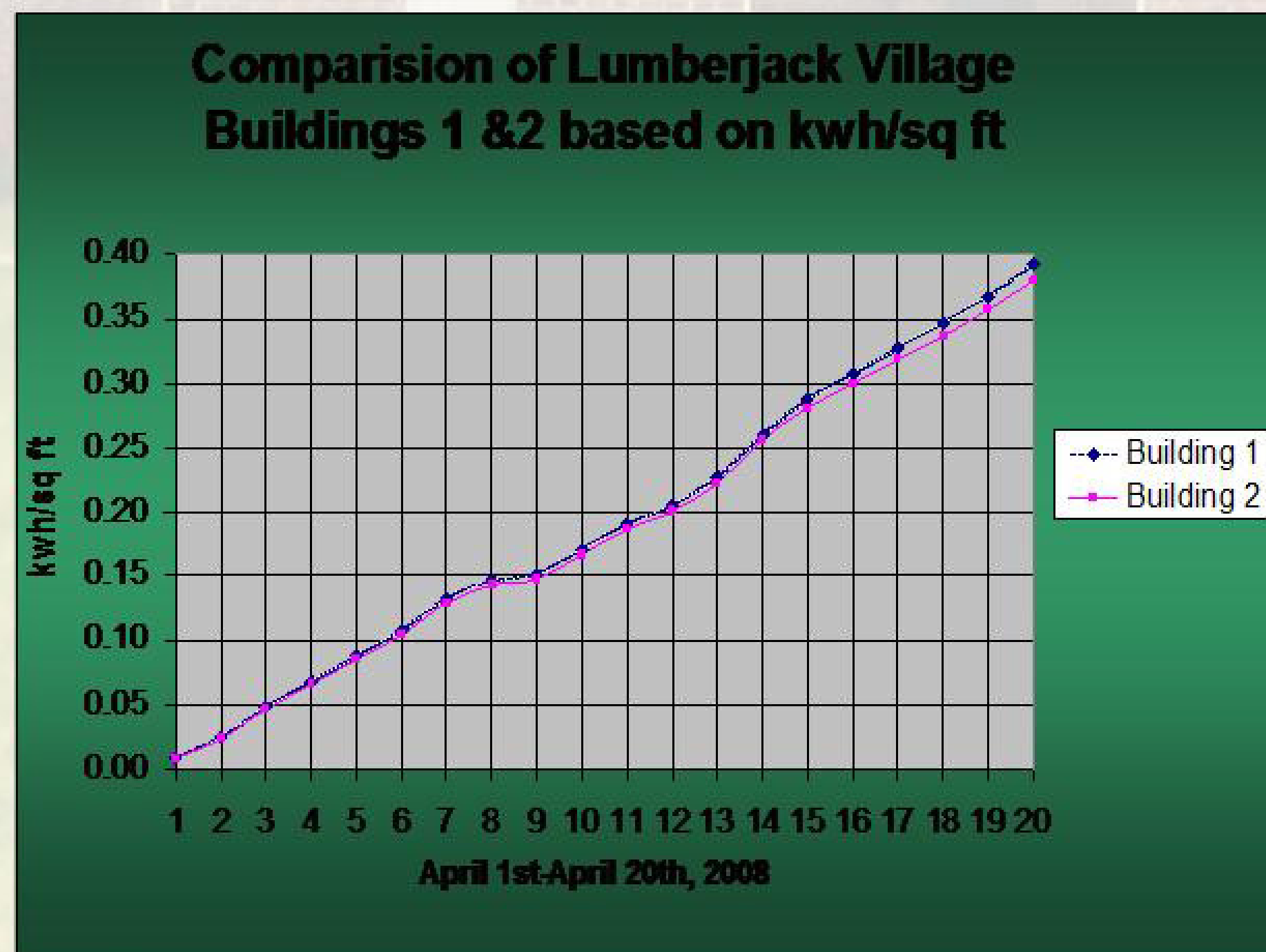
Environmental Science is the study of interactions among physical, chemical, and biological components of the environment. To connect Landscape Ecology and Environmental Science one needs to connect the desire for a sustainable environment with the reality of sustainable systems. Cultural Cohesion refers to linking of people by common intellectual, aesthetic and moral traditions...culture can be considered as a bonding force in its own right, separate from religion, economics, politics...” (Forman, p.492).



Lumberjack Village Energy Competition

At a very fine scale the local ecosystem, including resident halls, new buildings, might also be managed for sustainability.

“Do it in the Dark” Energy Competition was developed for Lumberjack Village Resident Hall. The goal of this competition was to create a cultural cohesion among residents and reduce the energy usage on campus. Paradox of Management tells us “One can more likely cause or create an effect at a fine scale, whereas success is more likely to be achieved at a broad scale.” (Forman p. 488).

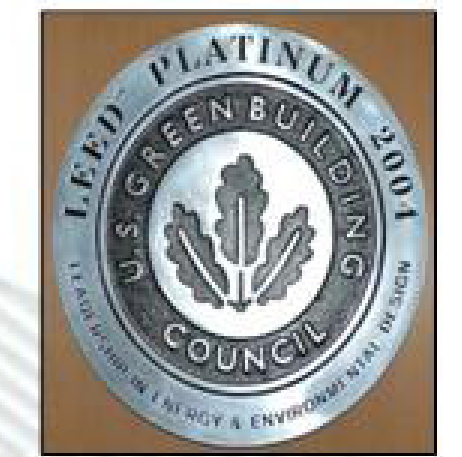


“Do it in the Dark” has been successful at many other campuses with energy reductions as high as 25%. Campuses with energy competitions include: Tufts University, Wesleyan University, Northeastern University, Rice University and Columbia University.

Sustainability through LEED®

For future considerations, building standards that promote sustainability within Environmental Science need to consider Green Building and incorporate standards for Leadership in Energy and Environmental Design (LEED®).

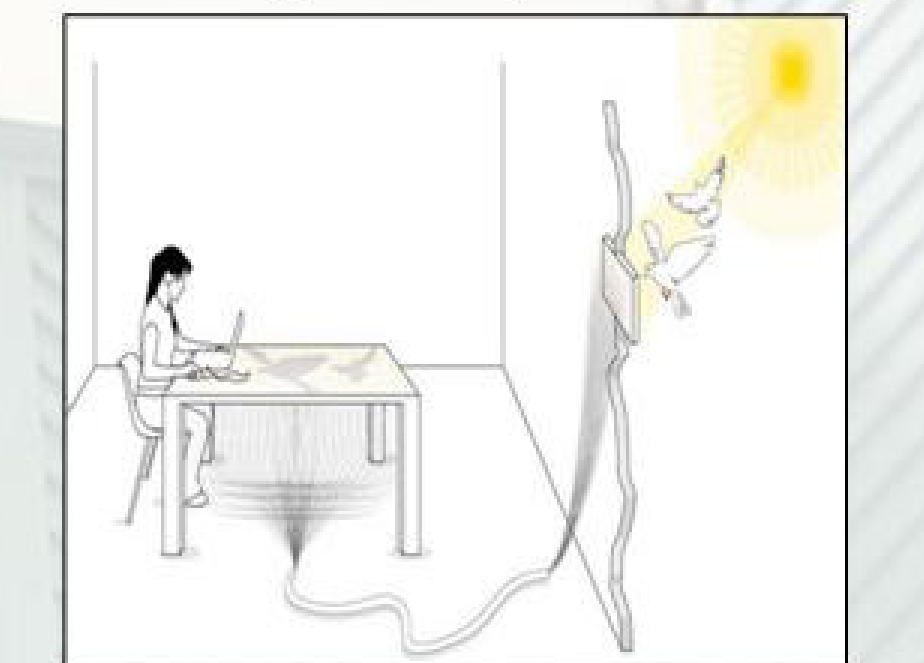
Similar to LEED® Sustainability, Tracking, Assessment, and Rating System (STARS) was developed for college campuses. STARS gives credits based on education and research including sustainability-focused classes and new student orientation programs. It also gives credits based on operations involving “green” new construction or the use of “green” products.



Solar Power Panels



Sunlight Transport Devices



Waterless Urinals



Translucent Building Materials



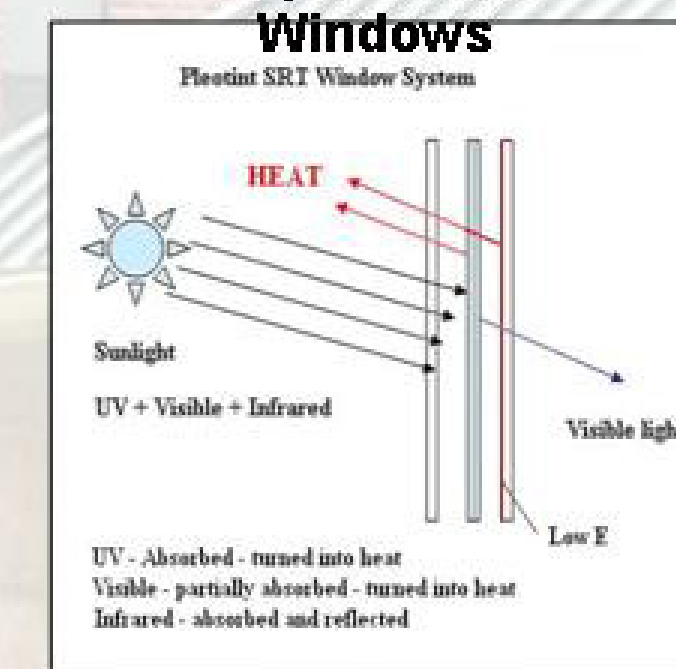
Green Roofs



Light Emitting Diode Lights



Triple-Paned Windows



Environmentally Sustainable Campuses

Adam Joseph Lewis Center for the Environment, Oberlin College



- Campus Resource Monitoring System for dormitory electricity and water use
- Living Machine cleans and recycles wastewater for use in building and landscape
- Active and passive heating and cooling systems including geothermal wells
- Retains stormwater for reuse in landscape
- Landscape produces food and grows native trees, shrubs and flowers

Center for the Environment at Catawba College

- Building uses recycled materials including bamboo flooring
- Double- and Triple-paned glass
- Low or no VOC paints
- Insulation made from recycled newspaper
- Ceiling tiles manufactured for noise reduction and light reflection
- Ground-source heat pump
- Occupancy sensors that automatically turn off
- Photovoltaic cells
- Campus green by planting native trees on campus

“The farther we get away from an individual caring for his or her own garden, the less effective planning and management decisions are” (Forman p. 488)



Do It In The Dark!

SFA Campus Energy Competition

April 1 - April 20

Join your fellow Lumberjacks and let's show the importance of reducing SFA's energy usage.

Lets reduce energy consumption and increase awareness on campus!

It's a matter of economics: Help reduce energy costs on campus to lower our energy bills!

Help reduce your residence hall's energy consumption for the next three weeks and WIN FREE PRIZES!!!

*This will be a three week competition between Buildings 1 & 2 in Lumberjack Village

*Each building will be monitored for a three week period and the building that reduces their energy consumption the greatest WINS.

“Think Globally, Plan Regionally, Act Locally”

Reduce Energy!

Set an example for the community! Here are some bright ideas to reduce energy both at home and at school.

1. Turn off lights when you're not using them.
2. Use sleep mode on the computer rather than a screen saver. This will turn your monitor off and will also extend the life of your computer.
3. Unplug things that you aren't using. Turning off power strips does the same thing. Appliances still draw electricity while they're plugged in even when they're off. Standby, also known as vampire power, use in the U.S. accounts for about 5% of residential electricity use and residential electricity consumers in the U.S. spend over 4 billion dollars on standby power every year.
4. Wash clothes on cold. Much of the energy used while doing laundry comes from heating up the wash water.
5. Hang dry clothes. The dryer is the second-biggest energy hog, right after the refrigerator.

“Think Globally, Plan Regionally, Act Locally”

Simple Ways to Reduce Energy

“Think Globally, Plan Regionally, Act Locally”

1. Turn off lights and TVs in the community areas if nobody is using them.
2. Wash only full loads of clothes.
3. Clean the lint screen on the dryer every time you use the machine. A clogged lint screen can make your dryer use up to 30% more energy and it can be a fire hazard.
4. Don't leave the refrigerator door open.
5. Open your windows on a nice day.
6. Do your homework in the library.



LEEDs420: Making SFA Campus Sustainable



“A sustainable condition...is one in which there is stability...achieved through meeting the needs of the present without compromising the ability of future generations to meet their own needs.” R.T.T. Forman.