

The center's thoughtful design emphasizes appropriate space for teaching and research while promoting good stewardship of the environment.

- Flexible building components made possible by the raised floor system allow for quick, low-cost updating as technology changes.
- 95 percent of construction debris is being recycled.
- This building is **designed to last 100 years.**

The planning process enabled faculty and students to use the building as a backdrop for learning:

- The Fundamentals of Hydrology class (GEO 280) explored the capture and reuse of rainwater.
- Environmental and Natural Resource Economics (ECON 260) examined the cost-effectiveness of water recycling.
- Introduction to Environmental Studies (ENVS 160) researched data and drafted text for this poster project.

Innovation & Design Process

This site was the location of the Faculty Offices building and the Thaxter, Throckmorton, and Edmonds classrooms. In demolishing these buildings, crews cleaned out asbestos, lead, and other contaminants.

Site development priorities included:

- Creating a more efficient and functional building.
The center has the same footprint as the buildings it replaces—
but it provides **three times more usable space**
while reducing the actual impervious footprint by 1,224 square feet.

Sustainable Sites

- Replacing nonnative trees and open blocks of grass with more natural and usable open spaces.
- Designing a storm water management system that limits disruption of natural water flows. The system minimizes storm water runoff, increases onsite filtration, and reduces waterborne contaminants.
- Developing water quality gardens. These contain appropriate vegetation in a sand-based soil. Plants and soils filter runoff before it enters a subsurface collection and storage system.

The building landscape received a 2002 Honor Award for Environmental and Sustainable Design from the Oregon Chapter of the American Society of Landscape Architects.

Water Efficiency

The building is designed to **capture and filter storm water runoff** from its roofs. Collected water is drawn on for irrigation across campus.

- Runoff is stored in the College reflecting pool and is used to irrigate campus plants and lawns, reducing the use of well and municipal water.
- Selected plumbing fixtures maximize water efficiency within the building and reduce the burden on municipal water supply and wastewater systems.
- Water efficiency features also include plants and grasses that are adaptive or native to the Northwest to minimize irrigation use.

The center is **designed to perform 40 percent more efficiently** than a conventionally designed facility meeting local energy codes.

Its energy-efficient and emissions-conscious features include:

- An EcoSystem™ elevator that is faster than a hydraulic elevator and does not use harmful hydraulic fluid. It uses about 40 percent less electricity than traditional elevators.
- Carbon dioxide monitoring devices that increase energy efficiency and support occupant health and comfort by improving ventilation effectiveness.
- Daylight dimming and occupancy sensors that save electricity and reduce interior heat loads requiring air conditioning.
- The building is expected to produce about **50 percent less greenhouse gas emissions** per square foot per year than the buildings it is replacing. Although the center is significantly more energy efficient than any other building on campus, Lewis & Clark continues to look for ways to develop buildings of even greater efficiency.

Energy & Atmosphere

Materials & Resources

75 percent of materials from the Faculty Offices building and the Thaxter, Throckmorton, and Edmonds classrooms were **deconstructed**. Approximately half were sent to the Rebuilding Center, a local building material recovery company. Building foundations were ground down and used as fill material.

In an effort to minimize resource depletion, materials come from local sources wherever possible. Fifty percent of building materials contain recycled content, such as:

- Terrazzo tile including 33 percent glass from curbside recycling.
- Cotton insulation made from 100 percent industrial scrap from blue jeans manufacturers.
- Aluminum made from 50 percent postindustrial material.
- Steel that is 90 percent postconsumer and/or postindustrial steel.
- Wood selected is largely from forests **certified** by the Forest Stewardship Council through its Principles and Criteria for Forest Management.

Indoor Environmental Quality

Design features promote the health of building occupants and enrich the learning environment.

- All occupied areas of the building have access to daylight and views.
- Internal and external sun shading systems minimize glare and solar heat gain.
- Carpet, paint, adhesives, sealants, and all other finishes are **low-emitting materials** free of formaldehyde and volatile organic compounds.

- Cotton insulation is used instead of fiberglass, a suspected carcinogen.
- Finish materials containing PVC, or manufactured using ozone-depleting hydrofluorocarbons, are also excluded from use.
- The building's raised-floor displacement ventilation system enhances indoor air quality while maximizing energy efficiency. Displacement ventilation supplies low velocity air at floor level and at a temperature only slightly below desired room temperature. Cooler air rises to displace warmer air, creating a zone of fresh, cool air at occupant level. Heat and air pollutants rise and are exhausted at ceiling level. Occupant exposure to contaminants is further minimized because the **exhaust air system carries away more contaminants** than a conventional ventilation system.

SOCIAL SCIENCES PROJECT GREEN FEATURES

Welcome to Lewis & Clark College's new center for the social sciences, developed to support scholarship and teaching of the highest caliber.

The building design team and Lewis & Clark adopted the U.S. Green Building Council's Leadership in Energy and Environmental Design Rating System™ for the project. LEED™ helps designers determine green project goals and design strategies, measure and monitor progress, and document results.

The building's 51,000 square feet include:

- 26 classrooms
- Wireless network access in all flexible-seating classrooms
- 3 classrooms with wired connection to the network at every seat
- 14 classrooms equipped for multimedia presentations
- 54 faculty and staff offices
- 7 rooms for meetings, conferences, and special projects
- 36 interior bicycle parking spaces

The project's design team included Thomas Hacker Architects, Walker Macy landscape architects, CBG Consulting Engineers mechanical and electrical engineering, Harper Houf Peterson Righellis civil engineering, Portland General Electric's Green Building Services Earth Advantage and LEED™ Consultant, and Lewis & Clark students and faculty who served on planning committees for the center and its classrooms.

Students Alyssa Babin, Marie Boisvert, Brian Kasavana, Spencer Fransway, Elana Guiney, and Laurel Nakanishi initiated this poster project and helped draft its text.

The graphic design firm of Circle Triangle Square, Heather Barta '86 and Brenden Hyde '87, designed this poster series.

For more information on the center or green building, please e-mail the Lewis & Clark Office of Campus Planning at planning@lclark.edu.

LEED™ categories & key to signage:



Sustainable Sites



Water Efficiency



Energy & Atmosphere



Materials & Resources



Indoor Environmental Quality



Innovation & Design Process