Nested in the northeast corner of the CSU Fullerton campus is the Arboretum, a 26-acre botanical garden that serves as a living museum of plants from across the globe. A rich resource for academics and community members alike, the site provides opportunities for ecological, horticultural, and historical education, as well as relaxation and recreation.

The Arboretum is also home to the first green building project at CSU Fullerton. The newly constructed Visitor Center, completed February 2006, was envisioned as an opportunity to physically exemplify the ecological purpose and mission of the Arboretum. Preservation of nature, sustainable resource use, and ecological awareness are promoted by environmentally responsible design. The Center was honored with the “Best Overall Sustainable Design” Award at the UC/CSU Sustainability Conference in June 2005.

The Center focuses specifically on energy and water efficiency, sustainable site management, and high indoor environmental quality.

Guided by a primary strategy of cost-effective, low-tech green design principles, the project team constructed the building using appropriate solutions to environmental problems. These solutions were selected to demonstrate how green building measures can be applied to other campus projects, and the wider community.

During the construction phase, careful management of materials achieved maximum recycling rates and reduced the quantity of materials sent to landfills. An erosion control plan was implemented to address sedimentation and water quality concerns. The Visitor Center promotes the use of sustainable construction materials by utilizing drywall, insulation, and flooring that contain recycled content. Various local materials were specified throughout the building to support local manufacturers, and avoid the environmental costs associated with transportation.

Efficient use of water is addressed extensively throughout the project. Landscaping around the Center consists of native, drought resistant plants that are well adapted to the dry Southern California climate. Water-efficient irrigation technology reduces potable water consumption when irrigation is necessary. Additionally, the Center is equipped with waterless urinals, low-volume toilets, and low flow faucets, which reduce water use by as much as 40 percent.
Water quality concerns are addressed with the use of pervious paving materials, including decomposed granite, which reduce stormwater runoff. These materials absorb rainwater and allow it to pass into underground aquifers, which helps prevent flooding and soil erosion.

**As stormwater passes through the ground, microbes and chemical processes can treat it naturally before it leaves the site, effectively removing contaminants and pollutants.**

Several measures reduce the energy consumed by the building. A mixed-mode system uses natural ventilation when the weather permits, and mechanical air conditioning when temperatures are extremely high. The natural ventilation strategy uses the positioning of the building to allow cool southwesterly air to enter through operable windows and doors at the ground level. Ceiling fans then draw hot air up for exhausting out high-level windows. When natural ventilation does not adequately cool the interior, a highly efficient, CFC-free HVAC system is activated. Energy efficient lighting fixtures with motion sensors and controls allow occupants to adjust interior light levels in response to daylight conditions. This technology empowers building occupants to curb unnecessary energy use and maintain a comfortable indoor environment.

The Visitor Center was designed to enhance indoor environmental quality and the comfort and health of building occupants. Low VOC-emitting products, including paints, adhesives, sealants and composite wood, are used throughout the building. These materials are linked to better indoor air quality and increased occupant healthfulness. Operable double-hung windows provide all occupants with natural light, ventilation, and views of the outdoors.

The building grounds and exterior are designed to lessen the impact on the environment. Light-colored paving materials reflect light, minimizing the project’s contribution to the heat island effect. In addition, exterior lighting fixtures have directed photometrics that reduce light pollution by distributing light downward.

The 8,537 ft\(^2\) building was completed for $2.9 million, and was funded entirely by donations. The Center is designed to be used by a broad range of patrons and support many activities, including educational instruction, research, exhibits, and cultural and social events. The building has a historical museum, conference center, catering kitchen, and classrooms. It also has a large covered pavilion for weddings, receptions, and meetings. Guided by the U.S. Green Building Council’s LEED® rating system for new construction, the building is designed to a Silver level.