

UNLV DEPARTMENT OF ENVIRONMENTAL STUDIES COOPERATIVE EDUCATION CENTER

Las Vegas, Nevada

The University of Nevada Las Vegas, Environmental Studies Program, Office of Energy and Environmental Education was created to stimulate a shift to a more energy-efficient, sustainable society in Nevada. The office has initiated a number of projects and programs directed toward the community at large, government agencies, utilities and businesses, to promote a variety of goals including:

- improving natural resource management;
- preventing pollution;
- reducing global environmental stress;
- improving the quality of life; and
- improving the local economy.

These efforts are being undertaken with the belief that innovative ideas must be developed locally, and have their effectiveness tested and demonstrated, before being spread throughout the rest of the nation.

The programs undertaken by the office are designed to promote conservation and reduce consumption. The office also seeks to further the knowledge of government, business, and industry on matters related to:

- environmental restoration;
- environmental remediation;
- sustainable development; and
- energy efficiency.

Specific programs organized by the office in collaboration with its local partners include a series of conferences and workshops related to energy and the environment; educational programs for high school and elementary students; and the creation of the Nevada Energy Consumer Educational Council, which is producing a home energy manual; as well as expanded public and professional education programs.

The UNLV Office of Energy and Environmental Education receives no state allocation of funding through the University of Nevada Las Vegas. It relies solely upon funding through grants, partnerships, and revenue from contracted education events.

Regional Conference Program

A number of regional conferences have provided forums for local professionals to examine a range of current and potential problems. These have included: the Colorado River Basin Workshop, organized in conjunction with the President's Council for Sustainable Development; the Facilities Uniting To Utilize Resources Efficiently (FUTURE) workshops, dealing with energy and water issues; The Western State's Emergency Management Exercise, simulating responses to a natural disaster; Photo Voltaic Cell and Solar Workshops, exploring the state's role in using new energy technologies; Electro-Magnetic Fields (EMF) Conferences, examining health issues; and a Boiler Efficiency and Safety Conference, for local facility managers. Partners in these conferences have included the Southern Nevada Water Authority, the Las Vegas Metropolitan Water Authority, the Nevada State Energy Office, the Nevada Power Company, the Sierra Pacific Power Company, the Southwest Gas Company, and the Western Area Power Authority. Other partners in specific conferences include the U.S. Department of Energy, the Nevada Division of Public Safety, Sandia National Laboratories, and the Southern Nevada Facility Managers Association.

Related courses for environmental professionals and managers, provided by the Office of Energy and Environmental Education, have covered environmental risk management, remediation of subsurface contamination, organic chemistry nomenclature for remediation, pre-engineering energy efficient fuels curriculum, a real estate seminar on energy efficiency, and an air quality workshop.

School Programs

The Office has organized energy and environmental education projects for school children grades K-12. These have included workshops and a summer academy for teachers, as well as the development of resource materials in areas such as society and the environment, energy and water, and Native American philosophies related to the environment. The Office also established a "mentor" program in which students from the environmental studies program visit classrooms and present materials about energy and the environment, while serving as positive role models demonstrating their own environmental concerns. The Office recently launched a highly successful SUNRISE (Students Understanding the Natural Resources in Society and the Environment)

Explorers program, which involved 1,600 disadvantaged elementary school children. The program included summer energy carnivals at two local elementary schools and field trips to the Las Vegas Water District's Desert Demonstration Garden. Sponsors included the U.S. Department of Energy and the Southwest Gas Company. Forty university students participated as volunteers.

Recycled Art Project

The Office organized a Recycled Art Project in cooperation with a number of local businesses in Spring 1995. The project utilized over 1,500 pounds of trash and defective materials that were collected and sorted for the project. About 8,000 students participated in a hands on "trash-to-art" activity at the Annual Earth Fair Celebration, viewed by 40,000 visitors to the fair. This project resulted in the establishment of a Reuse Center to collect scrap materials from local businesses for use in classrooms.

Nevada Energy Consumer Education Council

The UNLV Office of Energy and Environmental Education also established an ongoing partnership of local energy companies and government agencies, which is called the Nevada Energy Consumer Education Council. The Council includes most of the partners previously identified with the conference programs, as well as the Southern Nevada Homebuilders Association. Other groups affiliated with the Council include the Nevada Association of Professional Architects and the Southern Regional Association of Energy Managers.

The Council, developed to build partnerships with educators, community organizations, government agencies, the media, local school districts, and public and private corporations and businesses, supports and coordinates programs that will improve the quality of life and the environment in Nevada. Goals for the Council include encouraging the public and businesses to:

- use energy efficiently;
- improve indoor comfort;
- manage consumption behavior; and
- maintain health and safety.

The Council was established in response to a state-wide survey (conducted by the Office of Energy and Environmental Education) of public energy awareness. The survey indicated high levels of concern about energy conservation and a need for additional public education. The Council will maintain a number of the educational initiatives for school children and

professionals begun by the Office of Energy and Environmental Education. In addition, the Council will be active in public education, using a variety of media, including public service announcements, billboard displays, enclosures in utility bills, fact sheets, and newspaper articles and columns. The Council will also publish a quarterly newsletter Energy and Environment News. One of the Council's major efforts is the development of a consumer energy manual, which will be provided to builders, real estate agents, and property managers for distribution to new home buyers and renters.

Home Energy Manual

The Home Energy Manual; A Homeowner's Guide to Maintaining the Energy Efficient Home, which is currently available in draft form, provides a collection of information about home energy and water conservation measures and techniques. Some of the topics covered include:

- wall, duct, and pipe insulation;
- door, window, and other opening insulation;
- sun-shading devices and techniques;
- thermal mass storage;
- setback thermostats;
- energy efficient furnaces and air conditioning systems;
- fireplaces for heating;
- home ventilating systems;
- plumbing and water conservation systems; and
- lighting and appliances.

The manual also contains sections outlining home maintenance procedures for energy conservation and reviews a variety of energy-saving techniques. In addition, it discusses major home improvement techniques such as the use of water efficient landscaping to reduce heat gain and to provide screening, and the installation of fans to facilitate natural cooling.

The Council is planning to engage in several other educational and awareness activities. These include sponsoring home/neighborhood energy audits and workshops, promoting energy conservation in low income housing complexes to reduce utility bills, and conducting a follow-up energy awareness survey to assess the progress that has been made. Another proposal for the Council is to develop a state energy conservation icon and accompanying slogan, for use in recognizing energy efficiency efforts and programs.

—Community Sustainability Resource Institute

How To Get in Touch with UNLV Cooperative Education Center

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Scope: City/county/region

Inception Date: 1991

Participants: University personnel and students, state energy office, state utilities, local government agencies, local professional and environmental organizations, local businesses, schools staff and students, citizens

Project type: Public education, energy efficiency, economic development, natural resource management; recycling

Methods used: Partnerships and collaborative projects with local businesses and schools and city, county, and state government agencies

Lessons learned: Corporations will participate in community education efforts; working with ecological subject matter is a good way to hold the interest of students



UPDATE

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The University of Nevada Las Vegas programs in the area of energy and environmental education continue to be very active, although there have been some changes in the last two years. Christine Chairsell, founder of the Office of Energy and Environmental Education, has left the university to become the Provost of the Community College of Southern Nevada. Subsequently, the university reorganized its programs dealing with energy and the environment. The key contact point is now the Department of Environmental Studies' Cooperative Education Center, headed by Christine Wunderlin. The department also has a division of Community Sustainability, directed

by Dr. Kathleen Truman, a program on Innovations for Reuse in Education, staffed by Lisa Osario, and other related programs, including the Campus Green Coordinator, the Rebel Recycling Program, and the Boulder City Wetlands Project.

The range of activities continues to be very broad. In addition to ongoing programs in public environmental/science education and energy efficiency and energy conservation education programs for the Clark County School District teachers, the efforts include a Community Water Education Project, an ESP Water Assessment Project, and a tamarisk eradication program. The Department is also engaged in a research program on the socio-economic driving forces affecting the Colorado River Basin. They are also involved in a national parks project involving the Grand Escalante Staircase in Utah.

One current program, which has been very successful, is Innovations for Reuse in Education. In this program, local businesses and government agencies are asked to contribute surplus equipment and materials of various types that would otherwise be discarded, for use by classroom teachers in the local school system. The materials are distributed to teachers in a warehouse staffed by volunteers, primarily environmental studies students. From May 1996 to April 1997, volunteers devoted 1,385 hours in distributing more than \$54,000 worth of materials, which were used by 266 teachers in 85 elementary, middle and high schools.

Other projects included an Energy Carnival, held for 700 students at a local elementary school, and a public utilities and energy conservation and weatherization education program, held in cooperation with the Southwest Gas Corporation, at a local low-income housing project.

Some activities of the former Office of Energy and Environmental Education have been discontinued, including the follow-up energy awareness surveys, and, apparently, some of the conferencing activities. It appears that the Nevada Energy Conservation Educational Council may have been disbanded. Christine Wunderlin has no knowledge of the council and has indicated that the Energy and Environmental News publication has been discontinued. She is also unaware of the existence of the Home Energy Manual, which was previously available in draft form, although it may still be possible to track this down.

—Community Sustainability Resource Institute