Sustainable Campus • Sustainable Future

University of Nevada, Reno

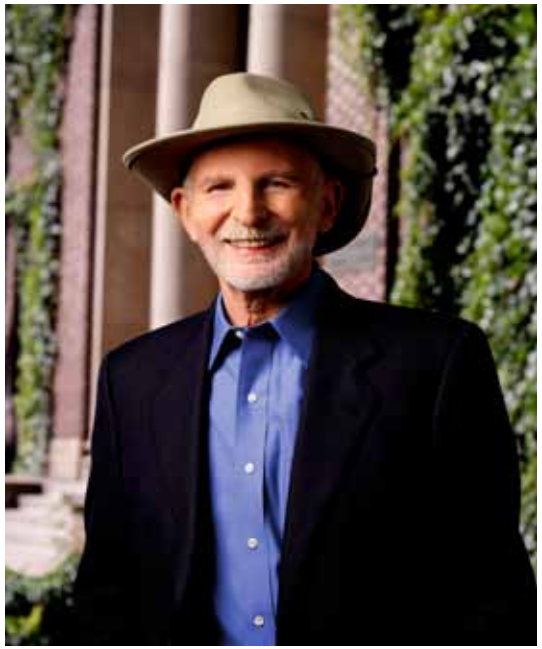
"The choices that students make every day are what drives the sustainability of our campus."

Delia Martinez

President, Environmental Action Team (EnAct)

Photograph by Daniel Clark

Message from **President Glick**



Dear Colleagues:

In 2007, I signed the American College and University Presidents' Climate Commitment. This commitment has now been signed by over 600 university and college presidents as a shared commitment to forging a path toward a sustainable future. Collectively we have recognized the need to reduce greenhouse gas emissions and bring about human change necessary to ensure our collective future.

All universities strive to teach, discover and make a difference in the communities they serve. Providing leadership on sustainability is a natural extension of these core missions. Our University has significant influence and we have the opportunity to exhibit leadership and model ways to achieve climate neutrality. One of our key contributions is the production of educated citizens in the form of our graduates. Our goal is to integrate sustainable practices into everything that we do — from our energy usage to our curriculum.

I hope you will join us in our efforts.

Milton D. Glick
President
University of Nevada, Reno

On the cover: *The Joe Crowley Student Union was the first building on campus to be built "green," using the US Green Building Council's LEED standards as a benchmark. The energy and water savings, improved indoor environmental quality and reduced materials use that are the result of an integrative design striving for these goals reflect the direction the University is going toward our goal of being more sustainable. A key part of the new campus core, the "Joe" is the students' living room and a space for community gatherings.*

Photograph by John Byrne

A Call to **Action**

A message from the co-chairs of the University's Sustainability Committee

In 2008, the University of Nevada, Reno formed a Sustainability Committee to gather information and develop a plan for creating a more sustainable campus. This plan is one of the requirements of the American College and University Presidents' Climate Commitment, signed by President Glick. The committee established four working groups comprised of faculty, staff, students and community members to investigate campus efforts related to energy, transportation, campus life, and curriculum. Their findings are reflected both in this overview document and a more detailed plan—with action items—still in development.

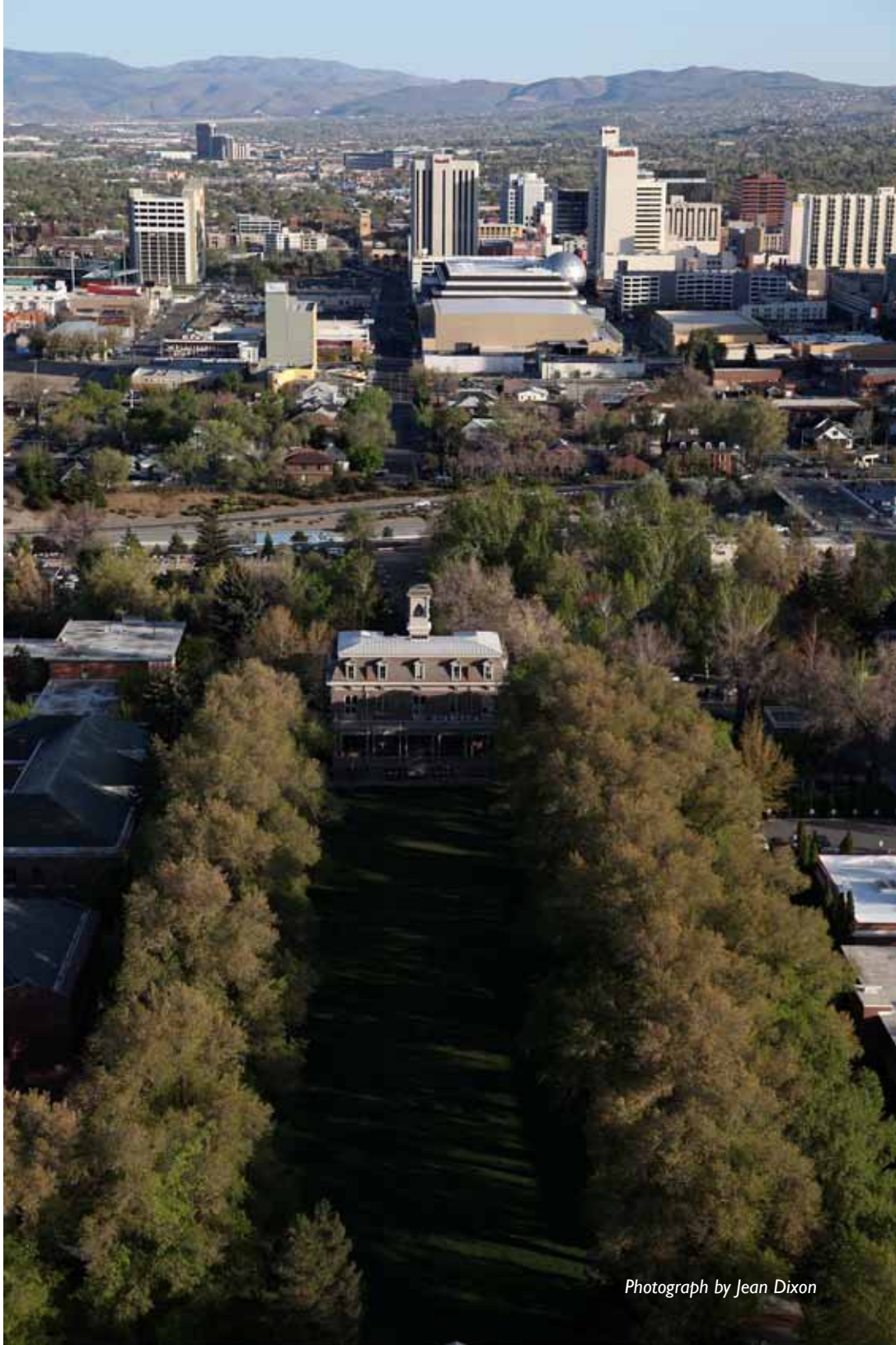
For many years, the University has been committed to reducing its energy consumption and adopting a variety of sustainability practices. Through the efforts of the Sustainability Committee, the University will identify additional actions to reduce greenhouse gas emissions. While some of these recommendations may require significant start-up costs not currently available, many will simply involve changing individual behavior that can have a significant cumulative effect (e.g., powering down all computers after work hours, increasing recycling, turning lights off when not in use, etc.).

Educating faculty, staff and students about how they can make individual contributions to reducing the carbon footprint of our University is an important component of our Sustainability Plan. By increasing our focus on sustainability in teaching, we hope to raise the awareness of this issue on campus and encourage individuals to help create a "greener" campus.

This plan is just a beginning, but the conversation has started and we hope to continue the dialog as our University strives to become a model for other college campuses, as well as our community.

Michael W. Collopy
Assistant Vice President for Research and
Executive Director,
Academy for the Environment

John C. Sagebiel
Environmental Affairs Manager
Environmental Health & Safety



Photograph by Jean Dixon

About this Plan

This plan highlights campus sustainability efforts at the University of Nevada, Reno in four key areas:

Energy

Gather data on the University's energy consumption and budget. Compile energy conservation accomplishments with respect to lighting efficiency and heating efficiency. Develop carbon reduction strategies such as increased use of photovoltaic systems and solar water heating.

Commuting and Transportation

Review alternate transportation options available to the campus and make recommendations for enhancements. Develop recommendations to increase the efficiency of transportation operations.

Campus Life

Gauge campus awareness of sustainability initiatives currently in place on campus and work to change the campus culture to one of awareness and support for environmentally sustainable practices both on campus and in the community. Facilitate the incorporation of environmental sustainability practices into the daily lives of every member of our campus community.

Curriculum

Strengthen the focus on sustainability issues across the curriculum through broad participation to ensure a cross-disciplinary approach. Identify gaps in the curriculum; consider the obstacles faced and the support required by faculty; and recommend specific steps to increase the focus on sustainability issues in teaching.

Admissions:
Call toll-free
1-866-2NEVADA,
or locally
(775) 784-4700,
Option 1

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Learn more: www.unr.edu/sustainability

Area of Emphasis: **Energy**

Energy is a major part of our greenhouse gas inventory. The University has for many years incorporated energy conservation principles and upgrades to major systems that have drastically reduced our energy consumption. On campus, thermal and purchased electricity were 61.6 percent of our annual greenhouse gas emissions in fiscal year 2007. This is an area where improvement is necessary. As a state, Nevada has one of the most aggressive renewable energy standards in the country. Currently about 15 percent of the energy sold in Nevada comes from renewable sources and a legislative mandate calls for this to increase to 25 percent by 2025. As a result, the University's greenhouse gas emission from its electrical energy use will continue to decline as a result of this mandate even if energy use remains constant.

Our primary focus will be to reduce our energy consumption and then to look at alternative energy sources. The University has already made improvements in lighting efficiency, thermal systems efficiency and equipment efficiency. These efforts have saved approximately 25,000 MWh and over 665,000 therms per year, enough to power 2000 homes for a year.

Goal: Energy Conservation

- Publish daily, monthly and annual building-by-building energy consumption reports. Set incentives for each building to reduce energy costs.
- Investigate third party financing for energy related upgrades.
- Reduce heat islands on campus to reduce summer cooling loads through the use of coatings that lower absorption of heat (e.g., high albedo coatings).
- Minimize the number of buildings used during the evening to achieve greater energy reductions.
- Maximize building utilization.

Future Plans in Energy Reduction

Reducing Energy Consumption

Heating –

- Set goals for minimum boiler efficiencies.
- Monitor campus heating BTU per square foot and set goals for each class of building.
- Install direct digital control systems.
- Set thermostats to 68 degrees F.
- Improve the "thermal envelopes" of buildings during renovations to improve insulation and reduce heat loss.
- Lower the hot water system temperature to its lowest operating setting.
- Evaluate the installation of solar hot water heating systems as a way to reduce hot water heating costs.

Cooling –

- Evaluate the efficiency of all building chillers and cooling equipment. Set minimum efficiency levels. Replace equipment that does not meet these minimum levels.
- Set summer space temperatures to 78 degrees F.
- Utilize variable refrigerant flow systems to improve efficiency wherever possible.

Lighting –

- Replace older energy-intensive lighting on campus.
- Eliminate the use of incandescent lighting and use fluorescent lighting wherever possible.
- Upgrade to LED lighting where feasible.
- Install lighting occupancy sensors and smart lighting controls on all interior lighting where feasible.
- Encourage the use of task lighting and natural light over other lighting sources.

Equipment/Computers –

- Set minimum Energy Star rating for all computing equipment on campus.
- Implement mandatory shutdown of monitors and personal computers when not in use.
- Install occupancy sensors for all vending equipment to set machines in low power mode when buildings are unoccupied.

New building design: LEED and energy targets

- Commit to achieving LEED 2.2 Silver standards or better in all new construction.
- Strive to achieve a 30 percent reduction from the model energy code known as ASHRAE Standard 90.1 in all new buildings.

Exterior Lighting

- Upgrade all parking garage lighting to high efficiency lighting and install day/night sensors where practical and security allows.
- Minimize athletic field lighting when fields are not in use by providing equipment to control lighting.

Expand and Upgrade Central Heat Plant

- Explore the construction of an on-campus heating and power facility that would be more efficient than the current high-temperature water heating plant or stand-alone boilers. Explore an agreement with a private energy firm to construct and operate a facility on University property that would sell hot water and electrical power to the University.
- Build a central chilled water plant to provide cooling to its buildings and include thermal storage using chilled water instead of relying on less efficient individual building chillers.

Renewable Energy: **Future Plans**

Funding for using geothermal energy at the Redfield Campus should be explored, including the construction of a cogeneration facility. This power could be used to credit campus consumption as well. Expanded use of solar photovoltaic, solar thermal and daylighting on the main campus will be pursued as opportunities arise.

"Addressing the nation's energy needs domestically with new clean technologies has been identified as a national priority. In response to this need, the University of Nevada, Reno has set the vision to become nationally recognized for the excellence of its educational, research and outreach programs in renewable energy. To achieve this vision, the University has established a Renewable Energy Center, capitalizing on many existing strengths and expertise in this area."

Manos Maragakis
Dean, College of Engineering

Area of Emphasis: **Transportation**

At the University of Nevada, Reno much of the transportation planning and infrastructure is handled by the Parking and Transportation Services Department. This group has been very active in promoting alternatives to the single-occupant vehicle and in providing a comprehensive list of options for all campus visitors. This has a dual purpose as we seek to reduce our greenhouse gas inventory and as the campus runs out of parking lot space. All of the programs are actively marketed to students, faculty and staff. Between 2001 and 2008, these activities helped to reduce the drive-alone rate from 58 percent to 43 percent.

Photograph by Jean Dixon

Current activities:

- **Wolf Pass Bus Program** – Campus members may purchase a subsidized pass allowing them unlimited access to all of the city buses for a significantly reduced fee. Carson City residents are also eligible to purchase an INTERCITY bus pass at a subsidized rate to ride the bus to and from Reno.
- **Carpool Program** – Campus members who register as carpoolers receive a premium reserved carpool parking space, share the cost of the parking permit with their carpool partner, receive a "Free Friday" parking permit which allows carpoolers to drive to campus separately on Fridays, and receive five free daily parking permits to use on days that carpooling is not possible.
- **Bicycle Program** – Bicyclists are provided free registration and free use of hundreds of bicycle parking racks and air stations located throughout campus. Bicycle lockers are also available for a nominal fee. Bicycle racks and lockers are continually added on campus as demand increases. Five free daily vehicle parking permits are provided to bicyclists for days that bicycling is not possible.
- **Alternate Fuels** – The Parking and Transportation Services Department runs most of the campus shuttle buses on bio-diesel fuels which also assists in keeping the campus green.
- **The Highlands Program** – The University entered into an agreement with The Highlands apartments management to provide a shuttle service to the apartments so that up to 700 student residents can shuttle to campus and leave their vehicles behind.
- **Motorcycle Program** – Since most motorcycle spaces are in areas that are too small or irregular for vehicles to park in, and because motorcycles use less space on campus, parking permit fees for motorcycles have remained low over the past seven years. New motorcycle spaces continue to be added on campus to accommodate the growing number of motorcyclists.
- **Walking Program** – Walking is an option for those who live close to campus. Sidewalks and pedestrian paths are located throughout the campus and city for pedestrians. Five free daily parking permits are provided to those who register at the parking office as a walker.

Future work in reducing the transportation impact might include:

- **Providing electric vehicle charging stations** – This might provide an incentive for owners of these vehicles and reduce our commuting impact.
- **Exploring the feasibility of a car share and/or bike share program** – This would likely be done with outside vendors that have an extensive network of established university clients. A bike share program might also include an on-campus bike repair station to assist campus bicyclists.
- **Continuing to work with the Regional Transportation Commission (RTC) to provide inexpensive commuter options** – This might include a shuttle to the new downtown transit center under construction, adding RTC stops around campus and co-marketing transit options for University users.
- **Improving people movement on campus** – As the campus grows, the need for more transportation options on campus also grows. Improvements in people movement such as separate bike and pedestrian lanes, special shuttle routes and buses will be considered as the need arises.

Photograph by Daniel Clark

Transportation **Success**

Between 2001 and 2008, University programs helped to reduce the drive-alone rate from 58 percent to 43 percent.

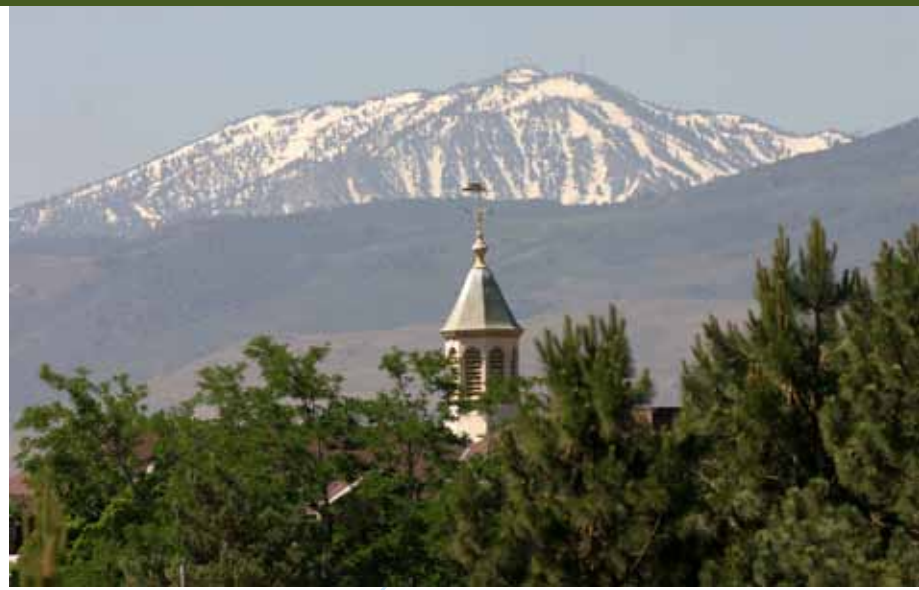
Photograph by Jean Dixon

10 Steps Toward a **Sustainable Campus**

A quick look at 10 examples of sustainability efforts on campus

1 American College and University Presidents' Climate Commitment

This commitment to reducing greenhouse gas emissions has been signed by over 600 university and college presidents including University of Nevada, Reno President Milton Glick.



Photograph by Jean Dixon

2 Reducing Surface Water Runoff

Jessie Henning, a graduate student in the Environmental Sciences Interdisciplinary Graduate Program recently started work on a program that will measure the effects of campus buildings, parking lots and sidewalks on the natural water cycle. The Ohio native is studying how the disruptions in that cycle as a result of campus buildings or parking lots contribute to flooding of the Truckee River.

Photograph by Crista Hecht

3

Reducing our impact with Composting

A student-led effort to reduce our garbage production and return valuable nutrients to the soils of the University's farmland.

4

Re-greening an old building - Forward-thinking Reno architect Ray Hellman designed Fleischmann Planetarium as a 'green' building over 45 years ago. The historic building's unique shape is dictated largely by an ingenious passive solar thermal system; the roofline traces the path of the sun across a wall of large rotating black and white louvers that collect heat as part of a complex ventilation system. Recent efforts have been made to reemphasize the building's renewable energy features; the results of these efforts are new working exhibits of clean power including a small wind turbine and an array of photovoltaic (solar electric) panels just outside the main entrance. When completed, the combined output will be about 1.5 kWh, roughly 20 percent of the building's current electricity usage.

Photograph by Jean Dixon

Photograph by Daniel Clark

Local Products - Senator Harry Reid visits the new greenhouse complex at the University's Valley Road facility where vegetables are grown for University use.

5

Campus Dining has added more locally grown and produced products to the menu and is pursuing further additions.

6 Creating a Bicycle-Friendly Campus

Registered bikes on campus increased 3.5 times between 2004 and 2009; 60% growth in the last year alone.

Currently there are over 100 bike racks, 48 bike lockers, and 3 air pump stations on campus; 6 lockers and 1 pump station will be added fall 2009. The bike program also offers bicyclists five free parking passes for use throughout the year.

Photograph by Jean Dixon

7 Reducing Our Carbon Footprint with Public Transit

The Wolf Pass Program offers students, faculty and staff a discounted bus pass allowing them unlimited access to all of the city buses for a significantly reduced fee.

Wolf Pass artwork courtesy of RTC

8 More Recycling, Greater Impact

Started in 1997, the Recycling Program has seen significant growth in the past three years. Student employees are an important part of the program.

9

Powering Down

Put your computer into hibernate mode or shut it off at night. For every computer shut off at night and on the weekends, you are saving 770 kWh per year! Every 100 computers that are shut off on campus, is equivalent to removing one vehicle from the roads every year!

Photograph by Jean Dixon

"Sustainability has become an important competitive variable in the marketplace. Even in difficult times, consumers are making choices based on a firm's commitment to the environment and socially responsible values. Learning how to help companies be sustainable will be an important part of a student's education at the University of Nevada."

Dale Rogers
Foundation Professor
Logistics, College of Business

Photograph by Jean Dixon

10

Putting the SILVER in Silver and Blue
Marguerite Wattis Petersen
Athletic Academic Center

The University of Nevada, Reno has received Leadership in Energy and Environment Design (LEED) Silver certification by the U.S. Green Building Council for the Marguerite Wattis Petersen Athletic Academic Center (pictured left). The 8,300-square-foot center is the first LEED accredited building constructed on the University campus.

Area of Emphasis: **Campus Life**

Faculty, staff and students can have a significant impact on campus and in our community by making sustainable choices in their everyday activities. In order to create a sustainability-minded campus it is vital that these initiatives be undertaken hand-in-hand with our students. Students' enthusiasm to think innovatively about their place in a rapidly changing world must be nurtured. The campus community needs resources and information to make informed sustainable choices. Campus services, student-led initiatives, and the campus culture are areas that display how sustainability is evident in our campus life.

Campus Services

- Our university currently recycles paper, cardboard, aluminum cans, tin cans, glass bottles and plastic bottles, ink and toner cartridges, E-waste (electronics, computers, monitors, etc), fluorescent light bulbs, scrap metals, batteries and many other types of material.
- The Food Services department has made a commitment of 1% of the meal plan revenue to go towards funding sustainable initiatives on campus. They also have an agreement in place to recycle fryer shortening with a local biofuels group.
- Food Services also is committed to adding locally produced products to their menu through a partnership with a local grower, Nevada Naturals.
- The Reno Bike Project and University Parking added two additional bike stations to campus. Residential Life and the ASUN Bookstore also collaborated with the Reno Bike Project and will now carry helpful bike supplies and repair instructions in the bookstore and dorms. The Reno Bike Project has also volunteered to hold bicycle repair classes on campus.
- Students are designing a Green Guide that will be distributed to all incoming freshman at orientation. This Green Guide will provide resources to students and will include details about current sustainability practices, community contacts, energy facts, and most important, a section devoted to what everyone on campus can do to make a difference.

Student-Led Initiatives

Student grassroots initiatives have played a significant role in spreading the word about environmental awareness. By actively endorsing student-run energy awareness and peer education initiatives as part of a coherent, long-term energy conservation strategy, the university administration will gain access to a widespread and highly motivated labor supply dedicated to reducing the University's carbon footprint. The establishment of an environmentally savvy, or "green" culture on campus will not only improve the university's energy efficiency and public image, it will impart graduating students with a personal commitment to adopting sustainable lifestyles they will carry with them throughout life. Here are a few examples of student led initiatives on campus:

- Three student groups (EnAct, Ecohydrology Club and SAIWI) are planning the first UNR Energy Wars in October 2009. Energy Wars is a competition between residence halls on campus to consume the least energy (natural gas, electricity, water).
- The EnAcT student group started an organic garden and composting system on campus, and has also sold their produce locally.
- A Student Sustainability Pledge was recently drafted (by students) to be added to new student packets.
- Our student-run newspaper, The Sagebrush, added a sustainability news column. A weekly or monthly sustainability column will engage a broader student and alumni interest in green initiatives both on campus and nationally.

Photograph by Jean Dixon

Campus Culture

The challenge of changing the culture of any university lies in increasing awareness and education of its students, faculty and staff. Faculty and staff participate and lead sustainability efforts in the classroom and in the operations of the campus—with much of the work happening behind the scenes. Students possess great enthusiasm and capability to think innovatively about their place in a rapidly changing world and are a significant part of the culture of any campus. While significant steps can be taken "behind the scenes" in terms of improved operations efficiencies, a large percentage must derive from personal commitment to change. A key part of this change is communication. The Sustainability Committee has done the following things to communicate with the campus and community about the current sustainability practices and information on campus:

- The University launched its sustainability website (www.unr.edu/sustainability) that highlights sustainability efforts on campus. This website also serves as a marketing tool for prospective students.
- The Campus Life working group designed a sustainability survey scheduled to be administered campus wide in the Fall of 2009. The results of this survey will be used to gather baseline data and educate the campus community.

The following actions, if adopted, could change the campus culture to a more environmentally sustainable one; however, they will require support from the entire university community:

- **Establish an "Eco-Rep" program.** Eco-Reps are students employed by a university to educate and encourage students about living sustainably. The focus of the Eco-Rep program would be to persuade students to recycle and engage them in energy awareness activities.
- **Increase energy awareness by installing energy monitors in residence halls.** The cost of installing these monitors and the real-time program software would be offset in a few years. In addition, campus energy awareness would increase significantly as a result.
- **Engage non-sustainability oriented groups and disciplines in campus sustainability initiatives.** The sustainability movement has spanned many different student groups on campus that might potentially contribute to improving campus energy use awareness. For instance, campus religious groups have recently been emphasizing environmental responsibility; the Arts and Music community also has the potential to produce a significant following. The administration is in a great position to encourage these groups to work together towards the energy conservation goals of the University as a whole.

Photograph by Daniel Clark

- **Create an "Eco House" residence hall** - A dedicated residence hall would provide sustainable living options for energy conscious students on campus and allows motivated students to live sustainable lifestyles, and creates a model for sustainable living on campus to which other students might look for information and guidance.
- **Establish a green fund.** A green fund could be created by students from a small student fee. This fund would be collected and reserved for sustainable initiatives and available to students through an application process. These funds would provide the university the opportunity to showcase student activities and facilitate new initiatives.

> *"Dining services has been a leader in our campus sustainability effort for several years. They continue to be innovative and effective in their efforts to provide quality services and more local foods at an affordable price while working with students to protect the environment."*
>
> **Shannon Ellis**
> Vice President for Student Services

Area of Emphasis: Curriculum

The University of Nevada, Reno places high value on imparting the necessary knowledge, understanding and skills to its graduates who will go on to shape the future. The students of tomorrow will meet these challenges and address issues of sustainability with the heightened awareness that comes through education. In order to fulfill this mission, universities must address the challenge of teaching students in a changing world and by providing faculty with the support necessary to keep instructional content and methods current and relevant.

The University has a long-standing and successful general education program, the Core Curriculum. This is the basis of interdisciplinary undergraduate education, and could be one vehicle for integrating sustainability topics into the program of study of all of our students. The core curriculum requirements expose students to a broad range of fundamental principles including math, writing, humanities, natural science and social science.

Teaching Faculty Survey

A survey of academic faculty involved in undergraduate teaching was conducted in February 2009. This survey excluded administrative faculty involved in undergraduate teaching. 1,433 surveys were distributed and 223 responses were received, a 15 percent response rate. This survey's aim was to collect some baseline data by gauging the perspective of faculty in three main areas: faculty's intrinsic motivation related to sustainability in education, i.e., the relevance of sustainability for themselves, and their interest in teaching sustainability; faculty's practice, i.e., whether they were addressing sustainability issues in their teaching; and faculty's concerns, i.e., the obstacles they saw for increasing focus on sustainability in teaching, and their perception of students' priorities.

Key Findings

65 percent of respondents rated their concern about sustainability as high or very high. The high level of personal concern among faculty is contrasted by their perception of the concern of students about sustainability: nearly 50 percent perceived students as moderately concerned.

45 percent of respondents reported that they integrated sustainability issues explicitly in courses they were teaching.

Photograph by Jean Dixon

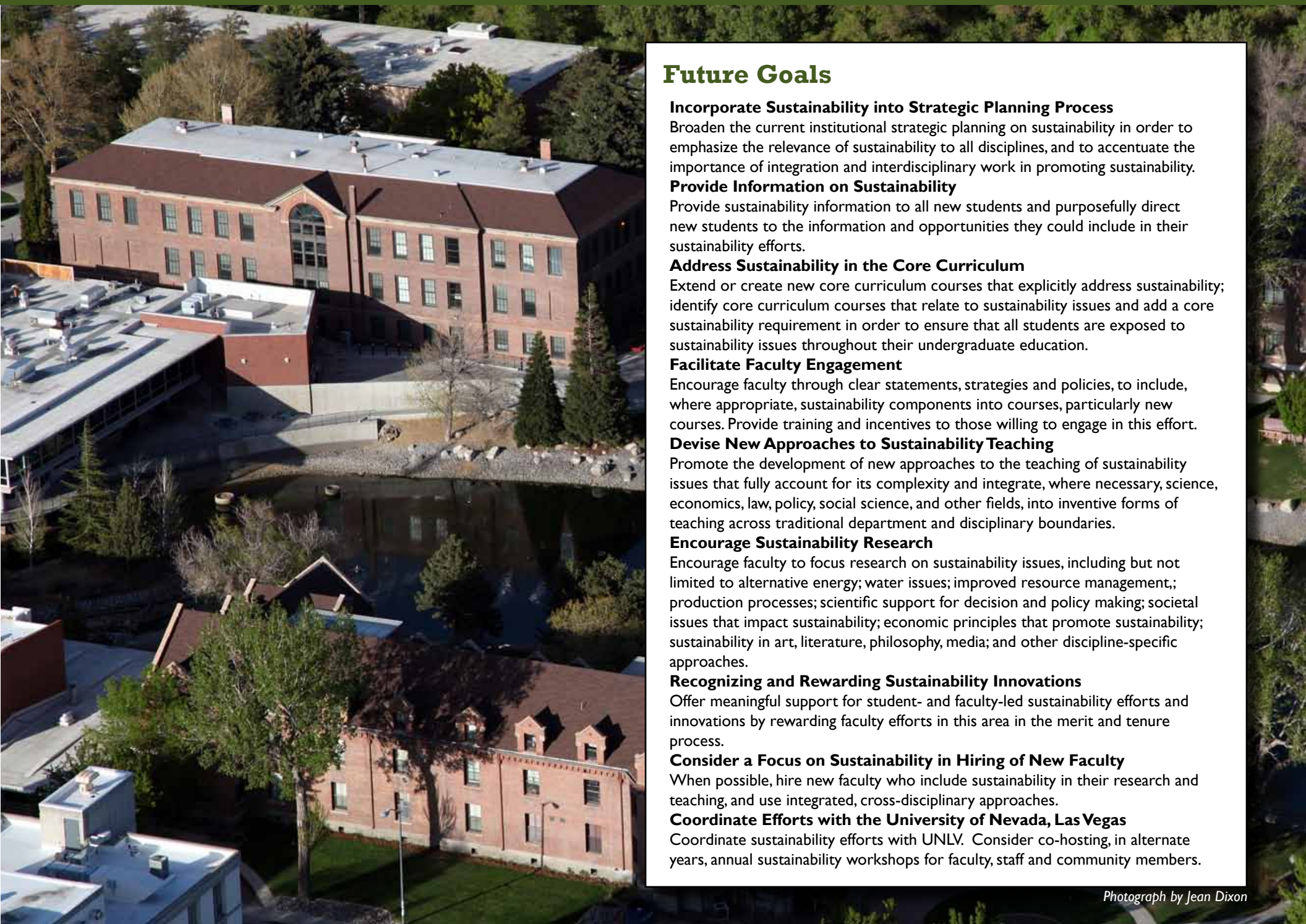
In terms of specific skills in topics directly related to sustainability issues, the University has several degree programs including: ecohydrology, environmental engineering, environmental and resource economics, environmental science, environmental studies, wildlife ecology and conservation, ecology, evolution and conservation biology, literature and environment, hydrologic sciences and interactive environmental journalism.

Many campus departments support faculty who integrate sustainability themes in their courses. Literature and environment faculty in the English department frequently teach sustainability-related undergraduate courses, as do faculty in political science, history, biology, geography, environmental chemistry and many other departments and colleges. There is tremendous potential to leverage the energy and intellect of these teachers to expand knowledge and understanding of sustainability principles among all faculty members.

To be effective long-term, the curriculum must help students to understand how information is acquired, assessed, and applied to make decisions that lead to meaningful action. A curriculum that prepares students, no matter what their field of choice, to deal effectively with the contingencies of the modern day world allows students to be effective as participants in the creation and maintenance of sensible and sustainable approaches to living.

> *"Stories, images, and metaphors bring to life the literature of sustainability, inspiring readers to think more deeply about the connections between their personal lives and the multidimensional social and environmental contexts of sustainability. Literature and other humanities disciplines are essential contributors to sustainability education."*

Scott Slovic
Professor of Literature and Environment
Co-teacher, with atmospheric chemist John Sagebiel, of "The Literature of Sustainability" and "You Are What You Eat: Food, American Culture, and the Humanities"
English Department, College of Liberal Arts



Future Goals

Incorporate Sustainability into Strategic Planning Process
Broaden the current institutional strategic planning on sustainability in order to emphasize the relevance of sustainability to all disciplines, and to accentuate the importance of integration and interdisciplinary work in promoting sustainability.

Provide Information on Sustainability
Provide sustainability information to all new students and purposefully direct new students to the information and opportunities they could include in their sustainability efforts.

Address Sustainability in the Core Curriculum
Extend or create new core curriculum courses that explicitly address sustainability; identify core curriculum courses that relate to sustainability issues and add a core sustainability requirement in order to ensure that all students are exposed to sustainability issues throughout their undergraduate education.

Facilitate Faculty Engagement
Encourage faculty through clear statements, strategies and policies, to include, where appropriate, sustainability components into courses, particularly new courses. Provide training and incentives to those willing to engage in this effort.

Devise New Approaches to Sustainability Teaching
Promote the development of new approaches to the teaching of sustainability issues that fully account for its complexity and integrate, where necessary, science, economics, law, policy, social science, and other fields, into inventive forms of teaching across traditional department and disciplinary boundaries.

Encourage Sustainability Research
Encourage faculty to focus research on sustainability issues, including but not limited to alternative energy; water issues; improved resource management,; production processes; scientific support for decision and policy making; societal issues that impact sustainability; economic principles that promote sustainability; sustainability in art, literature, philosophy, media; and other discipline-specific approaches.

Recognizing and Rewarding Sustainability Innovations
Offer meaningful support for student- and faculty-led sustainability efforts and innovations by rewarding faculty efforts in this area in the merit and tenure process.

Consider a Focus on Sustainability in Hiring of New Faculty
When possible, hire new faculty who include sustainability in their research and teaching, and use integrated, cross-disciplinary approaches.

Coordinate Efforts with the University of Nevada, Las Vegas
Coordinate sustainability efforts with UNLV. Consider co-hosting, in alternate years, annual sustainability workshops for faculty, staff and community members.

Photograph by Jean Dixon

Student-Led **Initiatives**

The Environmental Action Team

The Environmental Action Team (EnAct), operating since spring 2008, promotes sustainable practices at the University of Nevada, Reno and the Reno community by working with local businesses, non-profits and other student clubs to build a stronger community between the university and the public.

EnAct works to support our local food network, to practice and demonstrate innovative recycling and to help move our campus towards sustainability. Some of the events and projects hosted by EnAct include annual Fall Sustainability Festivals, UNR Earth Day Events, Trashion Shows, clothing and book swaps, recycled art exhibits, a student run organic farm, and Environmental Film Festivals including the Wild and Scenic Film Festival.

Engineers Without Borders

Engineers Without Borders is a pre-professional organization that works with communities worldwide to create sustainable technological development.

Sustainable Energy Forum

The Sustainable Energy Forum is a multidisciplinary student organization whose mission is to promote awareness of contemporary and future energy and environmental problems and spread awareness about available alternatives through K-12 outreach and community-based projects.

The Wildlife Society

The mission of the University's student chapter of the Wildlife Society is to enhance the ability of wildlife professionals to conserve diversity, sustain productivity, and ensure responsible use of wildlife resources for the benefit of society. Society members are dedicated to sustainable management of wildlife resources and their habitats.

The Student Association for International Water Issues

At the University of Nevada, Reno, the Student Association for International Water Issues, or SAIWI (pronounced "Say-wee") is working to develop an understanding of global water issues and promote community empowerment through education and water resource development. In January 2009, SAIWI traveled to Nkambe, Cameroon where an estimated 56 percent of people have no access to clean water. SAIWI taught a manual well drilling technique to locals and worked with them to complete a well for drinking water and taught water hygiene and sanitation seminars to over 250 people. The completed well provides safe drinking water for school children and a local neighborhood of 500-1000 people.

Students from SAIWI work to drill a well. Photograph courtesy of Marcy Kamerath

> *"The Student World Water Forum is a simulated professional conference that provides a venue for students to practice their presentation skills, graduate students to gain conference organization skills, and the professional community to interact with students by providing constructive evaluations of students' presentation skills. The goal of the SWWF is to address local, regional, national, and international water issues while also raising awareness about international water concerns to improve the sustainability of our water resources."*

Laurel Saito
Associate Professor, Department of Natural Resources and Environmental Science, Graduate Program of Hydrologic Sciences
College of Agriculture, Biotechnology and Natural Resources

Trashion Show

Students model fashions made from trash for the 2009 Earth Day Trashion Show organized by EnAct at the University of Nevada, Reno.

Photograph by Amy Shannon

Looking **Ahead**

Right: Solar panels on the roof of Nye Hall provide hot water for the residence hall.

The University of Nevada, Reno is committed to reducing its carbon footprint in the years ahead. We recognize the value of environmental sustainability and are aware of our responsibility to the community and the world at large. By establishing a culture of sustainability and environmental sensitivity, we can create a positive model for students, faculty, and the community and enhance our reputation. Our goal as an institution of higher learning is to put that awareness into practice. It is vital that sustainability initiatives be undertaken hand-in-hand with our students as universities are ultimately about education. We want to provide our campus community with the proper tools so they can make educated decisions and in turn, pass this knowledge along. The influence of one student goes only so far in his or her direct action, but the effect of such action can be infinitely large.

Energy, economic and environmental issues represent the greatest challenges of this century. Closely coupled to these are the social impacts any move in policy and approach will take. The University, in due recognition of its land-grant status, calls to action and will marshal its human and physical resources to meet these grand challenges. Many of the world's most talented students and academic leaders are poised to assure a brighter, sustainable future. We call on the University community—and beyond—to join us in this vital effort to secure this future.

Photograph by Jean Dixon

Incorporating Sustainability into the Strategic Planning Process

In addition to the American College and University Presidents' Climate Commitment, the University has developed an institutional strategic plan. This plan identifies sustainability as one of eight goals established to meet the mission of the University of Nevada, Reno.

- **Education:** Offer broad-based undergraduate degrees and coordinated, multi-disciplinary graduate degrees in the environmental sciences. Provide service learning experiences in sustainable community development and environmental remediation.
- **Research:** The Academy for the Environment will work with a campus-wide consortium of colleges and departments to facilitate multi-disciplinary approaches to basic and applied research in natural sciences, engineering, social sciences and the policy and behavioral aspects of sustainable practices. The consortium will work together within the University and with other Nevada System of Higher Education (NSHE) institutions to garner competitive research and educational grants to support expansion in the area of sustainable development.
- **Community Outreach:** Work with state and regional industries to identify industry-university partnerships that promote technology transfer to enhance sustainable economic and business development in the region and share sustainable business practices with the community through the University's Business Services Group and Cooperative Extension.
- **Climate Commitment:** Continue involvement with the Presidents' Climate Commitment to construct and operate university facilities to reduce environmental impacts.

> *"The Administration and Finance Division believes our future is in creating a sustainable campus. Our students, faculty and staff rightfully expect us to be a leader in demonstrating a green campus. We will strive to create sustainable buildings, landscape and infrastructure that both enhances the learning environment while at the same time lowering our greenhouse gas emissions, landfill waste stream and water consumption. All these efforts serve to underscore our commitment to our institutional Sustainability Plan and to the national American College and University Presidents' Climate Commitment."*

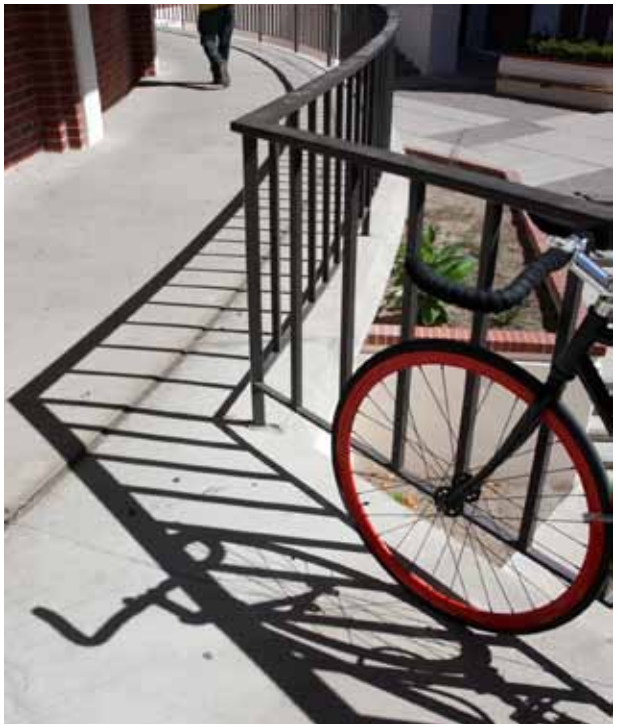
Ronald M. Zurek
Vice President for Administration and Finance

Photograph by Jean Dixon

Sustainability Committee

Melody Bayfield
Mike Bennett
Mike Collopy (Co-chair)
David Crowther
Jodi Herzik
Narsimha Kondamudi
Russell Meyer
Steve Mischissin
Jessie Payne
Hans-Peter Plag
John Sagebiel (Co-chair)
Duane Sikorski
Scott Slovic
Stephanie Woolf
Ron Zurek

Photograph by Jean Dixon



Working Groups

The **Energy Working Group** gathered and refined information with respect to the University's energy consumption and budget. The group also gathered prior University energy conservation accomplishments with respect to lighting efficiency and heating efficiency. ***Working group members:*** *Mike Bennett, Hans-Peter Plag, Steve Mischissin, Mike Collopy and John Sagebiel.*

The **Commuting and Transportation Working Group** was responsible for reviewing the alternate transportation options available to the University and making recommendations for enhancements. ***Working group members:*** *Amanda Kesjaral, Chelsey McMenemy, David Crowther, Diann Laing, Duane Sikorski, Ergian Zhu, Jodi Herzik, John Sagebiel, Ken Palm, Lee Brockmeier, Melody Bayfield, Neal Ferguson and Richard Estanislao.*

The **Campus Life Working Group** was responsible for gauging campus awareness of sustainability initiatives currently in place on campus and working to change the campus culture to one of awareness and support for environmentally sustainable practices both on campus and in the community. ***Working group members:*** *Jodi Herzik, Stephanie Woolf, Russell Meyer, Jessie Payne, John Sagebiel, Jessica Henning, Delia Martinez, Garth Kwiecien, Dan Ruby, Jason Geddes, Larry DeVincenzi, Diana Chamberlain, Tom Devine, Austin Wallace, Amy Harris and Bill Jacques.*

The **Curriculum Working Group** strived to strengthen the focus on sustainability issues across the curriculum. The broad participation in this working group from many different colleges and departments ensured a cross-disciplinary approach. ***Working group members:*** *Hans-Peter Plag, Guy A. Hoelzer, Jen Huntley-Smith, Stephen K. Lafer, Donica Mensing, Thomas J. Nickles, John Sagebiel, Christopher Simon, Scott Slovic, Julie Stoughton and James A. Sundali.*

Learn More

This report is a summary of a larger, more detailed report prepared by the Sustainability Committee and its working groups.

To download a copy of this white paper or for more information, visit:

www.unr.edu/sustainability

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Acknowledgments

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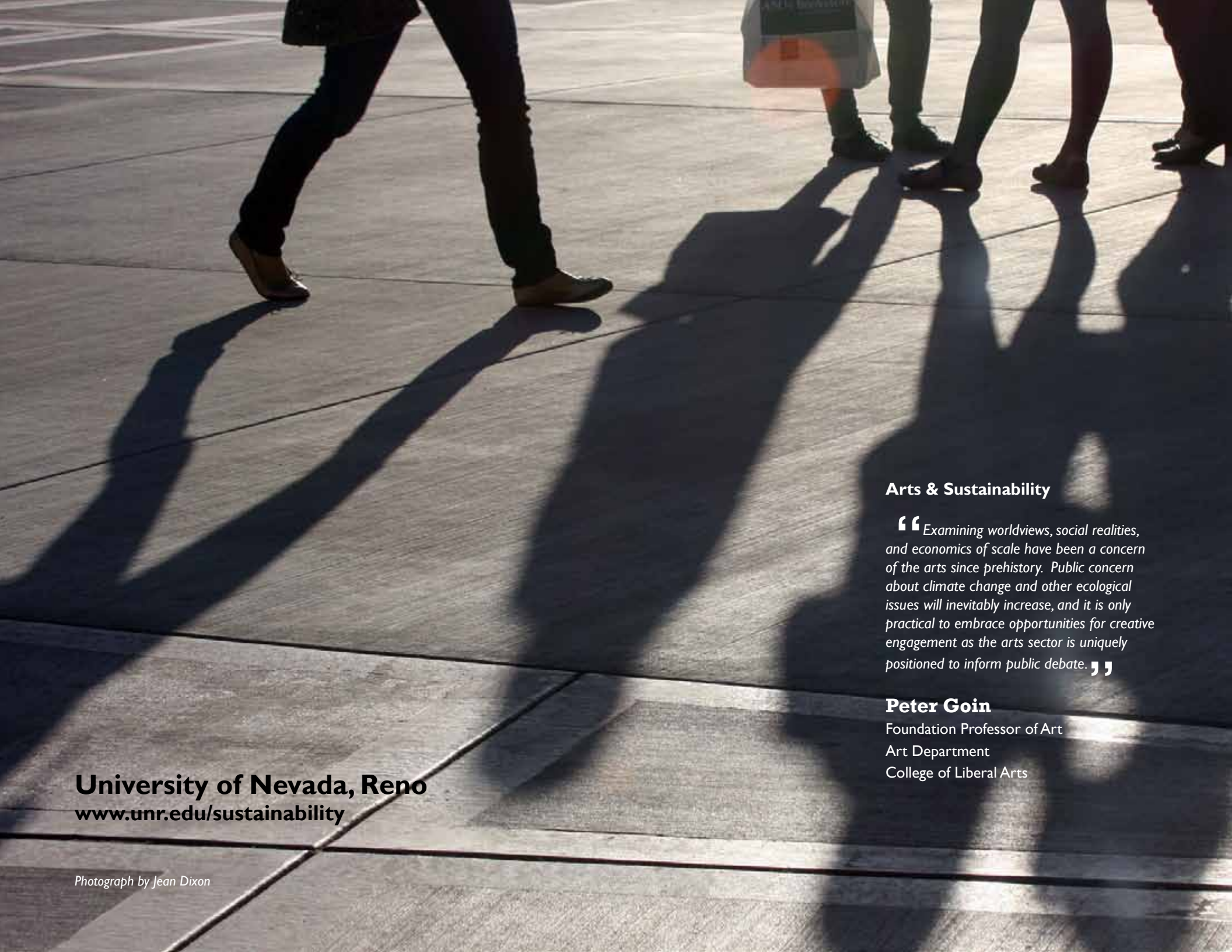
Right: Solar panels on the roof of the Joe Crowley Student Union. Photograph by Jean Dixon.

"Even defining 'sustainability' can engage a full-on battle, but that's a form of combat that demands everyone's serious attention and commitment. Across the curriculum, from philosophy to mining, economics to ecology, resource science to anthropology, geography to geriatrics, a very broad and campus-wide 'we' need to get serious about the appropriate use, management, and shepherding of resources. Absent that breadth and capability, our students risk emerging as one-trick ponies, and worse, without much hope of improving on that narrow view. Sustainability is not only for us all, it'll mean everything for our future."

Paul F. Starrs
Foundation Professor of Geography
Geography Department, College of Science



Arts & Sustainability

“Examining worldviews, social realities, and economics of scale have been a concern of the arts since prehistory. Public concern about climate change and other ecological issues will inevitably increase, and it is only practical to embrace opportunities for creative engagement as the arts sector is uniquely positioned to inform public debate.”

Peter Goin
Foundation Professor of Art
Art Department
College of Liberal Arts

University of Nevada, Reno
www.unr.edu/sustainability

Photograph by Jean Dixon