



BUTTE COLLEGE

A National Leader in
SUSTAINABILITY
in Community Colleges

Grand Prize Winner of the
NATIONAL WILDLIFE FEDERATION'S
CHILL OUT: CAMPUS SOLUTIONS TO
GLOBAL WARMING, 2008 CONTEST!



Dr. Diana Van Der Ploeg, President
Butte-Glenn Community College District · Oroville, California · www.butte.edu

LEGACY

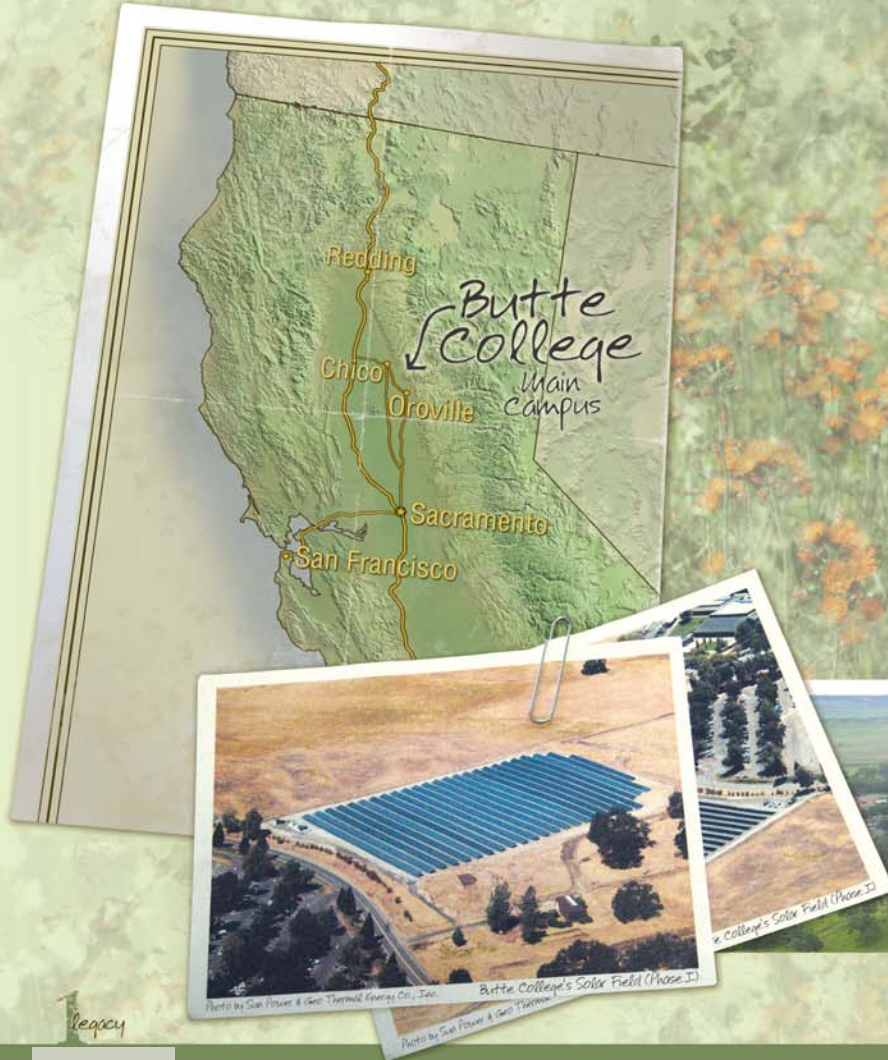
at Butte College

Leadership in Sustainability

Butte College was founded in 1967 and is situated on a 928 acre wildlife refuge nestled within the Sierra Nevada foothills of Northern California. We are dedicated to the principles of environmental stewardship, community partnerships, and educational excellence.

Butte College serves an annual student population of 20,000 students and employs 1,800 faculty and staff. Because of our size, one of the largest community college campuses in California and our relatively remote and rural location in the center of Butte County, Butte College functions much the same as a small city, providing our own water and transportation systems, waste treatment facility, police department, and much of our own energy generating capacity.

Butte College's Board of Trustees, administration, faculty, staff, and students honor our College's legacy of existing in balance with nature by committing ourselves in the 21st Century to Sustainability Education, partnering with students, community, and the living biosphere to envision and create a healthy and prosperous world for present and future generations.



1) View of Butte College, main campus. 2) Water fowl in the Biology Pond at Butte College, main campus. 3) Butte College, Chico Center.

COMMITMENT to Sustainability Leadership



The Talloires Declaration

We, the presidents, rectors, and vice chancellors of universities from all regions of the world are deeply concerned about the unbridled growth of environmental pollution and degradation, and the depletion of natural resources.

Local, regional, and global air and water pollution, accumulation and distribution of toxic wastes, destruction and depletion of forests, soil, and water, depletion of the ozone layer and emission of "green house" gases threaten the survival of humans and thousands of other living species, the integrity of the earth and its biodiversity, the security of nations, and the heritage of future generations. These environmental changes are caused by inequitable and unsustainable production and consumption patterns that aggravate poverty in many regions of the world.

We believe that urgent actions are needed to address these fundamental problems and to reverse the trends. Stabilization of human population, adoption of environmentally sound industrial and agricultural technologies, reforestation, and ecological restoration are crucial elements in creating an equitable and sustainable future for all humankind in harmony with nature.

Universities have a major role in the education, research, policy formation, and information exchange necessary to make these goals possible. Thus, university leaders must initiate and support mobilization of internal and external resources so that their institutions respond to this urgent challenge.

We Agree To Take the Following Actions:

1. Increase Awareness of Environmentally Sustainable Development
2. Create an Institutional Culture of Sustainability
3. Educate for Environmental Culture of Sustainability
4. Foster Environmentally Responsible Citizenship
5. Practice Institutional Ecology For All
6. Involve All Stakeholders
7. Collaborate for Interdisciplinary Approaches
8. Enhance Capacity of Primary and Secondary Schools
9. Broaden Service and Outreach Nationally and Internationally
10. Maintain the Movement

The Talloires Declaration (TD) is a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach at colleges and universities. It has been signed by over 300 university presidents and chancellors in over 40 countries.

The Butte College constituency groups, the Associated Students Body, Academic Senate and Classified Senate and Management Association, have endorsed this declaration through their constituency. Visit www.ulsf.org/programs_talloires.html for more information on the Talloires Declaration.

The American College & University Presidents Climate Commitment is a pledge to take a leadership role in addressing one of the defining challenges of the 21st Century—global warming. By signing the Presidents Climate Commitment, the College agreed to develop a long-range plan for the institution that will reduce and ultimately neutralize green house gas emissions on our campuses. In the process, the College will educate the next generation of leaders and professionals and show the communities and other societal entities that there are large competitive benefits to proactively engaging in this effort.

The American College & University President's Climate Commitment was signed by Butte-Glenn Community College District's president Dr. Diana Van Der Ploeg on January 10, 2007. Please visit www.presidentsclimatecommitment.org for more information on the American College & University Presidents Climate Commitment.



AMERICAN COLLEGE & UNIVERSITY PRESIDENTS CLIMATE COMMITMENT

LETTER OF INTENT

Anthony D. Cortese, Sr.D.
Co-Director, Presidents Climate Commitment
Second Floor
18 Tremont Street, Suite 1120
Boston, MA 02108

Dear Dr. Cortese:

I agree with the goals of the American College & University Presidents Climate Commitment. Addressing climate change in our curriculum as well as campus operations is an urgent and integral part of our mission as educators and our social obligation to society. Higher education plays a critical role in preparing the new workforce and creating the knowledge that will help society create the strategies, technologies, policies and economic opportunities that will allow humanity to thrive while protecting our life-supporting environment.

I will work to get broad involvement and support in my institution for achieving the goals of the Presidents Climate Commitment and will be a charter signatory to it. I also plan to attend the June 2007 summit of my colleagues from other colleges and universities in a joint effort to implement and publicize the Presidents Climate Commitment.

In recognition of the need to build support for this effort among college and university administrations across America, I will do whatever I can to promote this initiative to my colleagues at other institutions.

Sincerely,

Diana Van Der Ploeg

Diana Van Der Ploeg, Ph.D.
Butte College
January 10, 2007



STUDENTS

Programs and Curriculum

Sustainability Course Offerings

AB 22	Agricultural Economics	SOC 4	Modern Social Problems
AGR 10	World Food and Hunger Issues	SOC 5	Our Sustainable Future
AGS 24	Introduction to Environmental Studies	SOC 30	Introduction to Minority Relations
BIOL 7	Sustaining Life on Earth		
BIOL 12	Botany		
ECON 35	Introduction to Environmental Economic		
EH 20	Introduction to Environmental Horticulture		
EH 40	Introduction to Viticulture		
EH 72	Park/Landscape Management		
HIST 22	American Environmental History		
IDST 93	Civil Engagement Practicum and Project Leadership		
IDST 94	Introduction to Service Learning		
NR 26	Environmental World		
NR 28	Environmental Management		
NR 55	Wildlife Management		
PHIL 10	Environmental Ethics		
PSC 10	Introduction to Environmental Science		
PSC 50	Introduction to Weather		
PSC 52	Extreme Weather		
POS 92	Exploring Leadership		
PSY 11	Peace Psychology		
PSY 20	Personal and Social Growth and Wellness		

Course Offerings with Sustainable Themes

AET 36	Heavy Equipment Operations
AGS 30	Ecology of Insect & Disease Management
AGS 50	Soil Science
ART 1	Art Appreciation
BIOL 1	Introduction to Biology
BIOL 2	Human Biology
ENG 2	Reading and Composition
ENG 119	Composition Workshop II
GEOL 2	Physical Geography
GEOL 8	World Regions
LEAD 219	Composition Workshop I
LM 40	Life Management
PHIL 2	Introduction to Philosophy
PHIL 6	Introduction to Logic
PHIL 18	Eastern Religions
POS 12	California State and Local Government
PSY 20	Personal and Social Growth and Wellness
PSY 4	Introduction to Psychology: Individual & Social Processes
SOC 2	Principles of Sociology



General Education and Transfer

- Course Articulation with CSU, Chico Business Management, Sustainability Minor
- Course Articulation with University of California System Sustainability Programs
- Sustainability Components in General Education Courses Focus On Environmental, Social and Economic Literacy

Certification Programs (Development Stage)

- Sustainability Studies
- Managing for Sustainable Business Practices
- Green Building Techniques
- Energy Assessment Auditor
- Solar Panel Installation
- Green Interior Design Applications
- Hybrid/Alternative Fuel Auto Technology
- Sustainable Food Production/Organic Gardening

Associate Degrees (Development Stage)

- Sustainability Studies (Associate of Arts degree or general education requirements for Transfer Pathway)
- Green Building Construction Management
- Ecological Design
- Sustainable Land Use/Planning
- Managing for Sustainable Business Practices
- Sustainable Agriculture
- Sustainable Business Management
- Peace Studies

Existing Associate Degrees

- Environmental Horticulture
- Natural Resources
- Agricultural Science
- Biological Science
- Botany
- Physical Science

Workshops

- Renewable Energy Technology (Auto Program)
- Green Building Techniques
- Green Interior Design Applications
- Composting
- Organic Farming
- Managing for Sustainable Business Practices



1) View of Lake Oroville, near Butte College's main campus. 2) Students tending to riparian project goats. 3) Biological monitoring.

STUDENTS

Getting Involved

Focus the Nation

This major educational initiative coordinates teams of faculty and students at over 1000 colleges, universities, and high schools in the U.S. to engage in a nationwide, interdisciplinary discussion on 'Stabilizing the Climate in the 21st Century'. Focus the Nation is a one-day, national symposia held simultaneously on campuses across the country. Butte College has joined in this major educational initiative.

Graduation Pledge for Environmental and Social Responsibility

Graduates are invited to take this voluntary pledge, "I pledge to explore and take into account the social and environmental consequences of any job I consider and will try to improve these aspects of any organization for which I work." The pledge can be supported by anyone who wants to be intentional about the responsibility of his or her employment after graduation. Then, at commencement, students and supportive faculty wear green ribbons to display their commitment.

IDST 94: Service Learning – Sustainability Projects

Students may earn up to 1 unit in this special course section by participating in a sustainability-based service project in the community. A few examples of projects include: Starting a recycling project at a local elementary school; Creating a resource guide of the green material suppliers for local builders; Coordinating the Earth Flag project to fly over 300 flags city-wide; Transferring a PE department's paper records to digital; Coordinating autism education workshops for educators; Creating a Web-based resource guide for sustainability projects, events and businesses in the local community.

A.S. Sustainability Resource Center

The Center features a wide variety of books, journals, magazines, and a video collection. The goal of the Center is to be a hub of information for students, faculty and staff to learn about a variety of topics related to sustainability as well as practical guides on how to live and work more sustainably. The Center is funded and operated by the Associated Students.

Student Organized Sustainability Events

- Energy Awareness Fair
- Campus Sustainability Day
- Greendance Film Festival
- Campus Clean-up
- Focus the Nation
- Earth Day Festival
- Workshop Series
- Film Series
- This Way to Sustainability Conference (Butte College/CSU, Chico)
- Student Leadership & Civic Engagement Conference

Clubs and Student Groups

- Student Alliance for Sustainability
- Associated Students
- SIFE (Students in Free Enterprise)
- Phi Theta Kappa
- Friends of the Refuge



1) Student life at Butte College. 2) Students learning about native birds.
3) Student in native plant restoration/study. 4) GPS refuge mapping.
5) Butte College, main campus.



FACILITIES

For the Future

Ecological Design Construction

- Five new buildings (2002-2009) will meet U.S. Green Building Council LEED (Leadership in Energy and Environmental Design) standards.
- Ecological Design incorporates standard sustainable features that maximize energy efficiency, natural and recycled materials, siting, daylighting, and views.

Existing Building Retrofit Projects

- The College is mid-way through completing energy conservation projects throughout all campus facilities including lighting occupancy retrofits and upgrading HVAC units. This work is being done in partnership with Pacific Gas and Electric through the California Community Colleges/Investor-Owned Utility Partnership Project.
- The College is also exploring new hydrogen technology and the use of solar to power hydrogen generators, and hydrogen to fuel high time electrical needs.

Ecological Footprint Assessment

- 25% of the College electric needs are supplied by solar Phase I photovoltaic system
- Solar Phase I is a one megawatt array. Solar field plans are being developed to add an additional 2½ to 3 megawatts of solar in Phase II and Phase III.
- In 2007-2008 the College will complete a full environmental impact energy assessment.
- Our goal is a zero energy footprint by 2015.

Butte College is committed to improving its energy efficiency in the following ways:

- Variable air volume and variable frequency drives
- HVAC and lighting occupancy sensors in classrooms and offices
- Modulated multi-zone HVAC units
- Water and lavatory sensors
- Vending misers
- Lighting replacement
- Low flow valves
- Waterless urinals

Five Year Results - Usage per Square Foot

- From 2002-2006, campus facilities have decreased the overall use of electricity and natural gas by 33%.



1) Butte College, Learning Resources Center. Completed 2006. 2) Butte College, Chico Center. Completed 2004. 3) Butte College, Chico Center Interior. Completed 2004. 4) Butte College, Allied Health Public Services Center. Completed 2003. 5) Butte College, Learning Resources Center. Completed 2006.

FACILITIES

the Campus and Beyond

Transportation

- Butte College operates the largest community college transportation system in California.
- Systems features
 - 9 routes
 - 250,000 miles per year
 - Serves 1,000 students per day
 - Cost \$1,046,022 per year
- All Chico routes stops at the Chico Center to help students conserve fuel from driving to the main campus
- Partner with Butte County Transit to provide reduced rate fares for students
- Over 300 carpool spaces
- Member of **AlterNetRides**, a car pool sharing program
- Information on bus services is available online at www.butte.edu/bus

Recycling Waste

- Annual College operations waste stream recycled: 75%-93%
- Among the first large-scale institutions in California to meet the 50% diversion recycling standard in 1995
- Athletic track resurfaced with recycled tires
- Police academy firing range made with recycled tires

Auxiliary Services

- Napkins made from recycled paper
- Paper plates made from sugar cane - 100% compostable
- Food Services composting project with Agriculture Department (planning stages)
- Exploring the use of water vending machines to reduce bottled water consumption
- Bookstore offers selected titles through ebooks and electronic format

Photovoltaic Solar Project

Phase I

5,700 Sharp 185 watt photovoltaic panels on 3.5 acres

- 1.06 megawatts (direct current), 901 kilowatts (alternating current)
- Second largest community college solar array in the nation
- Generates 1.6 million kilowatts hours annually
- Provides 1/4 of the college's total energy = 300 single family homes
- Total utility cost reduction = \$300k/year

Annual Environmental Benefits:

- \$300k in avoided utility costs
- Eliminates greenhouse gas emissions equal to
 - 90 acres of trees
 - 18 pounds of sulphur dioxide
 - 738 pounds of nitrous oxide
 - 2.3 million pounds of carbon dioxide

Phase II and III (Planning Stage)

Goal: 100% Sustainable Campus

4 megawatt project includes:

- Solar photovoltaic panel expansion
- Hydrogen generation and storage



1) Butte College's solar array (Phase 1). 2) Students carpooling.
3) Athletic track.

INVOLVEMENT

the Community and you

Butte College and CSU, Chico (Joint Projects)

- The California Community Colleges/Investor Owned Utility, statewide programs, and community partnerships
- Butte County Association of Governments, Transportation Planning, and Habitation Conservation Planning
 - American Democracy Project – 2005-2007 (Sustainability Theme)
 - This Way to Sustainability Conference IV (November 2008 – Student Organized)
 - CSU, Chico College of Engineering and Butte College Vocational Education
 - Construction Management Courses
 - Contract Education Courses

Community Partnerships

- City of Chico
- Butte County
- North State Renewable Energy
- Local, Regional, Statewide Industry
- Pacific Gas and Electric
- K-12 Outreach
- Service Learning Projects
- Continuing Education
- Small Business Development Center
- Regional Occupation Program

Get Involved!

Ways for you to help support a sustainable Butte College:

- Sustainability Steering Committee
 - Made up of faculty, staff, and students who focus on the overall college sustainability initiatives.
 - The Sustainability Steering Committee oversees major projects, grants/funding, assessment, newsletter, awards and meets monthly.
- Sustainability Action Committees
 - Made up of sub-committees working on specific sustainability projects/areas of plan.
 - The meetings are defined by project needs.
 - The action committees reports to the Sustainability Steering Committee and through newsletter to campus.
- Sustainability Ambassadors
 - Open to anyone on campus that is interested in furthering education and support for sustainability on campus and beyond.
 - They share tips with colleagues, go on field trips, attend guest speakers, act as a sounding board to develop strategies, find solutions and gather monthly for meetings.
- Interdisciplinary Studies Course (IDST 94)
 - Students earn one unit to participate in or start a sustainability related project on campus or in the community.
- Conserve Fuel
 - We are partnered with AlterNetRides, a program that facilitates car pooling. It enables faculty, staff and students to link up with others to form car pools.
 - Ride the bus if you are enrolled in Butte College classes.
 - Information on bus services is available online at www.butte.edu/bus.
 - Coming Soon. Preferential parking for alternative fueling vehicle.



1) Local elementary students visit refuge. 2) Student Alliance for Sustainability Club contributing to Earth Days Festival by serving local organic lunch. 3) Building of Effluent Ponds. 4) Horticulture class, learning in the green house. 5) Student participating in the Energy Awareness Fair. 6) Students observing the riparian project goats.

Butte College Contacts:

Planning and Information: (530) 893-7536
Associated Students Sustainability Office: (530) 879-4316
Facilities Planning & Management: (530) 895-2381

www.butte.edu/sustainability

Butte College This Way to Sustainability Conference

SUMMER 2009!

Signatory Partnerships & Associations:



U.S. Partnership to UN Decade
of Education for Sustainable
Development 2005-2014



ULSF
Association Of
UNIVERSITY
LEADERS
FOR A
SUSTAINABLE
FUTURE

Talloires Declaration
(ULSF Chartered Sustainability
Action Pledge)



Association for the Advancement of
Sustainability in Higher Education



American Council of
Renewable Energy

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