

GREENING A RURAL CAMPUS:

Sustainability at Butte Community College

Butte Community College sits perched amidst rolling hills and streams on a thousand-acre wildlife refuge near Oroville, Chico and, quite literally, Paradise, California. Mike Miller is director of Facilities Planning and Management for the Butte campuses, which serve some 20,000 students a year.

On the main campus, the buildings, roads and service areas occupy about 250 acres. Another 80 acres are used for farming, and the rest is wilderness, some of which is used for grazing. The woods, streams, farmed fields and trails are learning tools for students who are studying a range of agriculture and science-related topics. They are also enjoyed by the communities surrounding the college.

Miller describes Butte College as its own self-contained city, the fourth largest in Butte County. It has a fire department, sewage system and water treatment plant. And like other rural campuses, it is challenged by a unique set of environmental and sustainability issues. Among these is a decision to use part of the riparian wilderness for grazing, which is something Miller says helped stave off the devastating effects of an enormous wildfire that blasted through the area recently.

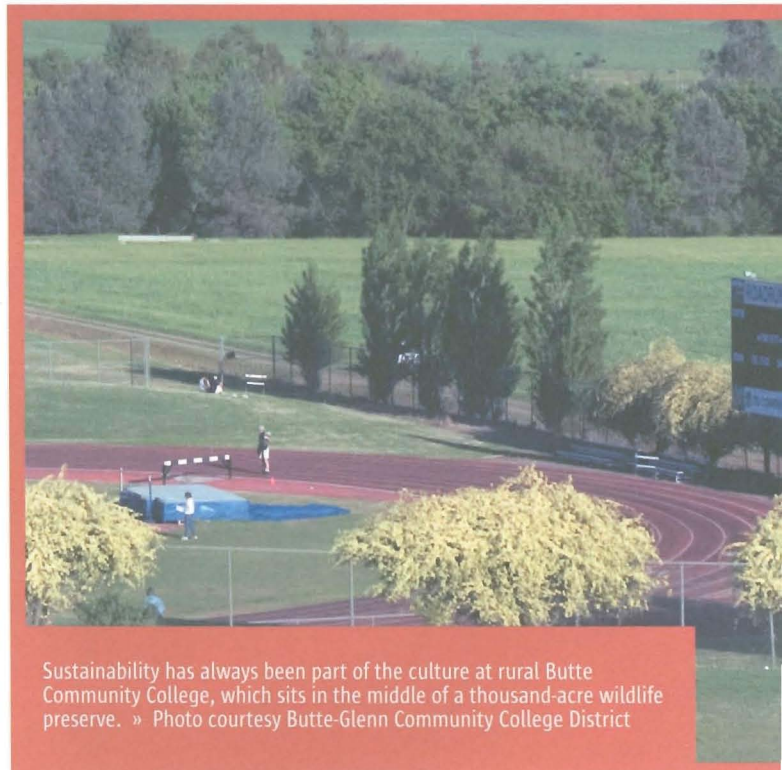
“The grazing program that works with our Ag classes also helps in fire prevention,” he explains, “which was proved out in the last couple of months when we had the Humboldt fire. It started in Chico and travelled to the very edge of the campus. It burned quite a bit of the open areas of the campus, but because of firebreaks and grazing, the damage was minimal. We didn’t lose any structures or out-buildings.” That means over 100 structures were saved, including 25 major buildings, a total of about 450,000 assignable square feet. Also saved were about 80 acres of landscape, 30 acres of playfields, a football stadium and baseball stadium. “It’s an extensive campus, no doubt about it,” he says.

Another issue facing rural campuses, and rural communities in general, is transportation. Butte is one of the few colleges to provide bus transportation for students. In fact,

it’s the largest transportation system of any community college in California. The Butte system transports 1,200 students a day. “That’s basically 1,200 cars that are not on the road every day, which is a good thing,” says Miller. The college also provides preferential parking for carpools and is planning to add hybrids to the list of vehicles allowed into the preferred parking areas.

A Rural Tradition Come of Age

Green building and energy efficiency have always been part of the mindset at Butte College. In 2002, a local bond measure of \$85 million was leveraged for state funds of about \$40 million. This allowed the college to institute its first new



Sustainability has always been part of the culture at rural Butte Community College, which sits in the middle of a thousand-acre wildlife preserve. » Photo courtesy Butte-Glenn Community College District

building program in many years. The Allied Health building was completed, a three-story learning resource center, the two-story Chico Center building and a three-story library

remodel have all been completed. “Now I’ve got two new buildings going,” Miller says, “the new Instructional Arts building and the Student General Services building – over 140,000 square feet total.”

In 2002, long before greenhouse gas and climate change were common terms, the college set a minimum energy efficiency standard for its buildings of 15 percent under the mandates of Title 24, the energy efficiency building code in California. The Chico building came in at 19 percent under, and the Learning Resource Center and library remodel both achieved 29 percent under the statute’s standard.

Now the college is using LEED (the U.S. Green Building Council’s rating system) metrics in their building projects. With a goal to achieve the minimum certification, LEED Certified, Miller says the arts building, now under construction, looks like it will actually achieve a Silver (third highest) rating, and the student building might achieve a high Gold (second highest) rating.

“Things can change over time,” he says, “but we have been building very energy efficient buildings and very healthy buildings. We’ll certify these buildings and then go back and try for LEED EB (existing buildings rating) and recertify our existing buildings.” There’s also discussion about a new LEED Campus rating.

Miller and his staff at Butte have so much experience with green building that they have become a knowledge base for other schools and colleges. They now hold an annual sustainability conference at which schools from K-12 through university levels come to learn about building green. “We found out we have pretty good methodology in putting up green buildings and putting standards to them,” he explains. Next year, Miller hopes to expand the conference to include community members, local renewable energy businesses and students.

Solarizing

Besides green building and transportation programs, Butte is also “solarizing.” Currently they have a one-megawatt solar field operating, and there are two more phases to come. Solar panels will also be added to new buildings. The goal is to be climate neutral by 2015. “That may sound ambitious,” says Miller, “but you have to set a high mark to get anywhere. I think we’re on the way.

“We have a one megawatt plant now and we want to



Ariel view of Butte College, a model for its community. Following Butte’s lead, the local school district is also planning to build green schools. » Photo courtesy Butte-Glenn Community College District

add another two megawatts. We’ll also put covered parking in with solar roofs.” Right now, the solar plant provides more than 25 percent of the campus’ electricity. Next year, Miller hopes to replace 50 percent of the campus’ electricity needs with solar power. Over 30 years, he says the college will save about \$25 million in avoided costs.

Putting the “Community” into a Community College

A green campus is a model for the community it serves in many ways. On any day, biology students from Butte College will be taking measurements in the stream bed in the wildlife refuge. Grade school students and local businesspeople will arrive for tours of the solar field. It’s a place where you can get your hands on new technology, see how it works. “We’re no ivory tower here,” says Miller.

Community colleges are the least funded of all levels of education in California, and Miller says they must be frugal, while at the same time be a proving ground for new technologies. “When a technology is out there that is so efficient that community colleges can make it work, we need to go for it,” he says. “When I drop solar panels in a field or on a building, I’ve got to show a payback. I can’t solarize just for the sake of using solar, but if I can make it work, it means that any college can make it work.”

In California, community colleges educate upwards of 2.3 million students – together they form the largest school district in the world. Miller says the fact that colleges put students through every two years means that every two years 20,000 new students will look at what’s going on at Butte and can see the value of these new technologies and sustainable programs.

“They are the ones who will benefit,” he says, “and they will take it out into their careers and their lives.” ■