

Environmental Management at the University of Colorado: a Student Administrative Partnership

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During the last two decades, the University of Colorado has introduced new programs to reduce environmental impacts in a variety of areas including solid waste, transportation, energy use, water use, and waste reduction, and has also substantially increased its commitment to environmental education. In most cases, the driving force has been student demand for the improvements. In addition, students have continued to play a major role in managing many of these initiatives. The student role is quite unique, and may provide a useful model for other schools.

CU Environmental Center

The driving force behind many improvements on campus is the CU Environmental Center. The Environmental Center is the nation's largest student run environmental resource center. Started in 1970 by a group of students who organized the first Earth Day at CU, it now has 4 permanent staff, 33 student staff and over 100 volunteers. The Center is the focal point for efforts to make the university more environmentally responsible. By combining the experience of permanent staff with the enthusiasm of student activists, the Center is able to generate a substantial force for environmental reform.

The Center is primarily funded by student fees. Currently, every student pays a fee of \$3.54 per semester, which provides 70% of the \$250,000 annual budget. This funding mechanism provides a substantial degree of independence, allowing the Center to question the practices of influential sectors of the administration and academic departments.

In many cases student activists or the student government are out front, demanding changes in campus practices or more funding for environmental initiatives. The Center is able to provide the technical expertise and the training in organizing techniques that allows student efforts to succeed.

One benefit of this approach is that it develops the skills students need to advocate for environmental change when they leave campus. Few academic programs train students in skills such as how to run a campaign, planning strategy, fundraising, producing newsletters, database management, volunteer coordination, and all of the other skills that are necessary to go from having a good idea to actually changing policies.

Students at campuses with the ability to assess student fees through referenda should consider establishing environmental centers, getting students to provide the funding needed.

Transportation

The transportation program at CU is also very strong. It started in 1990, when the administration paved over two fields to build parking structures. This was a wake-up call to students, who didn't realize anything was happening until construction began. Student activists initiated discussions with the administration about starting to shift people out of cars instead of continually providing more parking. They got a good response, for two reasons. One was that administrators realized that the campus has a limited amount of land available for parking, and that it is very expensive to build parking structures. At a construction cost of \$25,000 per new parking space, CU was facing up to \$50 million dollars in construction costs to address anticipated demand. The other was pressure from the city for the university to reduce its impact on traffic.

In 1991 students ran a referendum to tax themselves in order to provide a bus pass to all registered students. This passed 4 to 1, and allows students to ride local and regional buses for free. In the five years since then student ridership jumped from 300,000 to 1,500,000 trips per year. The student bus pass is managed, negotiated and promoted by students. Students also got the campus planning commission to adopt a policy that new construction could not reduce bicycle parking, and got a substantial investment in new bike racks. In the last two years the campus has added a weekend bus to popular ski areas, and worked with the city to create a downtown-campus shuttle. The next major step which we anticipate is a faculty/staff bus pass. It will be funded partially by general fund and partially by a surcharge on parking permits. This should start in fall 1997. We also anticipate a new staff position of campus alternative transportation coordinator.

We are able to track the impacts of the program in several ways. Survey results on the number of students who participate in the program show that over 70% of the student body use their bus pass at least once a semester.

We can also look to modal shift data to quantify the impacts of the program. The City of Boulder Center for Policy and Program Analysis performs a 'diary study' of travel habits by students every two years. In 1990, 35.9 % of all trips were on foot, 17.6% of all trips were taken by bicycle; 18.9 % by Multiple Occupant Vehicle (MOV); 23.8% by Single Occupant Vehicle (SOV); 2.3 % by dorm shuttles, and 1.5% by transit.

After 5 years of program operation, these numbers shifted significantly. In 1996 39.8% were on foot; 19.9% by bicycle; 18.3% by MOV, 14.6% by SOV, 4.2% by transit, and 3.2% by dorm shuttle. Note the large decline in SOV use, and the significant increases in walking, biking and transit.

Recycling and Waste Reduction

The CU Recycling program is one of our best known efforts. Started in 1976 by students at the Center, it is now operated by a joint student-administrative partnership. Under this setup students are responsible for operating the recycling facility, promotions and education, and for marketing materials to outside vendors. The administration is responsible for collections. The administration invested \$500,000 in a recycling processing facility, which they are paying off through avoided disposal costs. Students invest over \$100,000 annually through student fees. We are diverting 35-40% of the campus waste stream. In 1995 the National Recycling Coalition declared the effort the nation's "outstanding school recycling program". Decisions are made by the Solid waste Advisory Board, a joint student-administration committee. While there is a certain amount of inefficiency and many turf struggles due to the joint decision making, the final outcome is very effective because all stakeholders are involved.

In addition, the process encourages student environmental groups and the student government to take an active interest in the activities of the recycling program. With students watching, none of the partners can reduce their commitment to recycling, and periodically students demand greater efforts. Currently students are demanding higher levels of recycling within the residence halls.

One new idea that the Center is working on is advance disposal fees for waste imported onto campus. As an example, free newspaper distribution costs the campus at least \$150,000 per year in collection costs, while only a small fraction of this is recouped through selling the materials for recycling. Under the new proposal, free newspaper distributors might be assessed a fee to help pay for the cleanup costs. Similar concepts apply to soda vendors, catalog mailings to students, and other cases of off campus companies importing waste onto campus.

Environmental Education

Undergraduate environmental education at CU has been largely driven by student demand. While CU has had an environmental studies programs for decades, the university never invested resources or gave the program dedicated faculty. Starting in the late 1980's, student interest in the program exploded, from 130 majors in 1987 to over 600 today. In the last two years student protests demanding more resources have convinced the administration to provide more funding, commit to hiring dedicated faculty, and create new classes. While many individual faculty members recognized the problems with the program (in fact, a faculty review of the program written in 1970 identified the same problems as the students did 20 years later), no action was taken until students made the front page marching on the president's office.

This history is quite different than the faculty driven programs at many schools. It is only now, in the wake of strong student demands, that faculty are beginning to meet on their own to

strengthen the program. While there are many faculty with strong environmental research and teaching interests within their departments, the barriers to interdisciplinary work are quite strong.

One particularly interesting development is the creation of classes with an 'action research' focus. These include classes on campus ecology, investigating toxic emissions from local corporations, and a class on 'thinking like a mountain'. Students are asking that action research be made a requirement, so that every environmental studies graduate has at least one semester of experience at grappling with a real world environmental problem.

Green Building

Students are now working on revising campus building standards to look at toxicity, embodied energy and recycled content of building materials. In addition, there is a major expansion planned for the student union building. This building is under the control of student government, which has agreed to make this an example of state of the art environmental design. We are planning a design charette for this building during the fall of 1997. Once again, the impetus towards green building is coming from student demand, backed up by the willingness of the administration to experiment.

Challenges:

There are many challenges still facing CU. We need further improvements in energy efficiency, and new programs to reduce use of water and of hazardous materials. The efforts to strengthen environmental studies may still founder on the shoals of departmental resistance. There is no wide incorporation of environmental literacy into the teaching efforts of all departments.

One thorny issue is hazardous waste reduction. Since the vast majority of waste is generated by research and teaching labs, waste reduction requires faculty members to change their practices. This is a difficult process - in many ways it is much harder than changing the administration. It is very hard to mandate changes such as microscale experiments in teaching labs. There has even been resistance to a proposal as modest as a faculty checkout, requiring professors to label and identify toxic materials in their labs when leaving university employment! This is one area where we would probably get further if initiative came from faculty rather than from students.

Pesticide use on campus is also a contentious issue. While the grounds crew does practice integrated pest management, many students and community members question the continuing practice of spraying pesticides for 'non essential' purposes such as controlling dandelions. The administration considers it important to maintain a conventional 'golf course' style lawn appearance, while some students have argued that instead the campus should lead the way in low

water use, use of native plants, landscaping for insect and bird habitat, and low chemical use. Administrators believe that the lawn appearance is tied to funding - that parents, state legislators and alumni will be less likely to send their children, state tax dollars, or donations to CU if the appearance is unconventional. This makes them very reluctant to consider changes.

The Environmental Center sponsors an annual Campus Earth Summit to bring students, faculty and administrators together to discuss potential improvements. The process is quite slow. Most improvements have been driven by student activism, or by the commitment of a handful of faculty and administrators. Despite the fact that the Chancellor signed the Talloires declaration in January of 1997, we have not yet succeeded in really changing the administrative culture to seriously incorporate environmental concerns in all decision making.

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