

# Rocky Mountain

Rocky Mountain Association of Higher Education Facilities

# Views

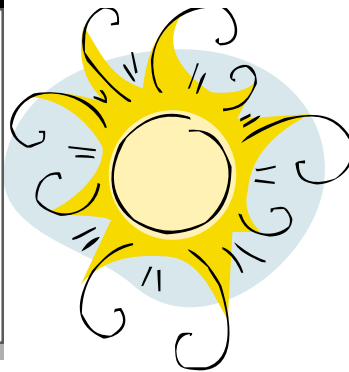
Officers



Summer 2003

*inside....*

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## President's Message

Fall Semester is almost upon us. I'm sure most of you are extremely busy doing all the things we facilities folks do to prepare for the student's return in the Fall. My name is Dave Brixen and I'm currently your acting president as a result of Steve Baldick's departure in April. A thank you goes out to Steve for his leadership during his time as RMA President.

I just returned from the APPA Leadership Forum in Nashville. This year the APPA Leadership Forum was co-located with our colleagues from NACUBO. All I can say about the Leadership forum is WOW! The venue was absolutely stunning! The educational program was excellent and the keynote speakers superb.

I want to give you a brief summary of some of the current discussions that took place in Nashville with respect to APPA and RMA business:

Both APPA and RMA are concerned about membership. For example, RMA's membership declined by nearly 6% from last year's level. APPA has implemented the "Member-Get-A-Member Campaign." APPA is encouraging members to help recruit a new non-member institution between August 1, 2003 – October 31, 2003. Please take some time and talk with a colleague from a non-member institution and share with them the benefits of belonging to APPA and RMA. You can have a prospective member access [www.appa.org/newmember](http://www.appa.org/newmember) for an application or you can contact APPA Member Services (703) 684-1446, [randel@appa.org](mailto:randel@appa.org) and provide the contact information. If a non-member institution joins APPA between August 1 – October 31, 2003, you win a free registration to the 2004 APPA Annual Educational Facilities Leadership Forum in Washington, D.C. In addition, for the region that recruits the most new members, some sort of reward/prize will be provided (to-be-determined). We need your help to grow APPA and RMA!

Is your institution interested in applying for the APPA Award for Excellence or the Effective and Innovative Practices Award? Entries are due by January 31, 2004. More information is available at [www.appa.org/membership/awards](http://www.appa.org/membership/awards).

APPA has launched a new training program for supervisors called "APPA's Supervisor's Toolkit – Your Solution for Success." This is an excellent training program designed to assist new supervisors develop the skills needed to be successful as a supervisor. The program is offered under the umbrella of the Institute for Facilities Management, September 2003 in Indian Wells, California or, at your own institution. For more information call (703) 684-1446 or visit [www.appa.org/education](http://www.appa.org/education).

This is just a sample of the great things APPA provides it's membership.

At the RMA level we have asked for volunteer State/Province Coordinators to assist us in the retention of current members and recruitment of new members. So far we have the following volunteers:

### State/Province

### Name

Arizona	Polly Pinney – Arizona State University
New Mexico	Harvey Chase – University of New Mexico
Utah	Craig Bohn – University of Utah
Colorado	Nancy Hurt – Colorado State University
Montana	Eakle Barfield – Montana State University
Wyoming	Volunteer Needed
Canadian Provinces	Volunteers Needed

If you are interested in volunteering to coordinate APPA/RMA retention/recruitment activities in your state or Province please call me, Dave Brixen, at (480) 965-7687 or email at [david.brixen@asu.edu](mailto:david.brixen@asu.edu).

Finally, a reminder to join us in Sedona for the RMA Educational Conference September 17-20. For those of you planning to attend, don't forget to attend the annual meeting at 4:30pm on September 19.

See you in Sedona!

Dave Brixen  
Acting RMA President



## **RMA 50th Anniversary Celebration September 17 – 20, 2003**

The RMA 2003 Conference Committee is busy finalizing details for RMA's 50<sup>th</sup> anniversary celebration September 17-20 in spectacular Sedona Arizona. We have an exciting line up of Business Partners who will be joining us, educational sessions on:

- LEED, Green Building Rating System
- Futuristic Technology in Facilities Today and Tomorrow
- Workforce 2005
- Implementing a Multi-Campus Public Access Defibrillation Program
- Thermal Energy Storage-Issues not Widely Known
- Total Cost of Ownership Model
- Small Campus Facilities Systems Integration
- Futuristic Technology in Higher Education

and trips to locations which include the Grand Canyon and Verde Canyon Railroad to entice you. If you have not already done so, now is the time to make your plans to join your colleagues to celebrate the past, the present, and the future of RMA.

Visit our WEBSITE at <http://fmis.fm.asu.edu/GoldenProspects.html> for the latest in conference information and on-line registration.

For questions contact:

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Dave Brixen	(480) 965-7687	David.Brixen@asu.edu

## **SHOW ME THE MONEY:**

### **Are Federal Funds Available for Education Projects?**

**by Herb Ohrt**

To the recipients it's called "earmarked funds," "targeted appropriations," or "Economic Development programs." To its critics, it's called "pork," "academic pork," "the other white meat." Yes, at this time of meager institutional funding and tightfisted state legislatures it's good to know that the academic pork barrel has never been bigger.

While you can argue that Congress shouldn't be in the business of handing out money, the simple fact is that it's there

- there are earmarked funds available. Isn't it time you grabbed a slice of this multi-billion dollar federal pie?

The practice dates back to 1977, when Tufts University sought and received the first earmark for research. Federal funds are earmarked by a member(s) of Congress for a college or university without going through a formal process of evaluating schools competitive proposals. This earmark, or directed grant, is a legislative provision designating that the funds go to the intended recipient.

Academic pork can be an acquired taste. Critics say it erodes the competition among universities that should be required to receive federal funds. The reality is that earmarked funds have become an important source of revenue for many colleges and universities. A total of 668 institutions of higher education got earmarks in 2002, according to the *Chronicle of Higher*

## *Education.*

What qualifies as a federal spending priority is very much in the eyes of the beholder. Many legislators are bringing millions of dollars in federal funds to their home state in a game Sen. John McCain, R-Ariz., who opposes the practice, calls "Don't vote against my pork and I won't vote against yours." According to Citizens Against Government Waste, the 2003 federal omnibus funding bill contains earmarks for 9,362 pork projects at a cost of \$22.5 billion +/-.

There is no question that a lot of federal money is wasted. Here are some real doozies that give "pork" a bad name:

- \$21 million for the Magdalena Ridge Observatory in New Mexico.
  - \$7.8 million to study Hawaiian sea turtles.
  - \$4 million for the International Fertilizer Development Center.
  - \$1 million to study bear DNA in Montana.
  - \$725,000 for the Please Touch Museum in Philadelphia.
  - \$405,000 to help construct the Blue-Gray Civil War theme park in Kentucky.
  - \$340,000 for the Roswell UFO museum in New Mexico.
  - \$202,500 to construct the National Peanut Festival Agricultural Arena at the fairgrounds in Dothan, Virginia.
  - \$90,000 for the Cowgirl Hall of Fame in Fort Worth, Texas.
- Some pork projects from fiscal year 2002 are also worth noting:
- \$50,000 for a tattoo-removal program in California.
  - \$450,000 for ornamental fish research in Hawaii.
  - \$2,225,000 to provide winter recreational opportunities in Fairbanks, Alaska.

Odd as it may sound, some projects are earmarked even if there is no official request. According to Citizens Against Government Waste, no request for earmarks was made by Housing and Urban Development (HUD) for Economic Development Initiative grants for 2003 but Congress added 889 projects totaling \$260 million.

The June 2002 issue of *Readers Digest* reported that Mitchell E. Daniels, President Bush's budget chief, urged the Senate to

reduce funding for unrequested research projects. But the request fell on deaf ears. Legislators proceeded to approve a nearly \$32 million earmark for West Virginia National Guard facilities that the Pentagon didn't think was worth asking for.

Thankfully, some "pork" appears to be reserved for requested projects more notable than tattoo removal. In fiscal year 2002, Congress directed federal agencies to award \$1.837 billion to projects involving specific universities and colleges, according to the *Chronicle of Higher Education*.

The March/April 2003 issue of *School Construction* reported a \$20 million grant to the University of Alabama for a new science and engineering building. The announcement came from the office of U.S. Senator Richard Selby, R-Ala.

Many colleges and universities are earmarked to receive funding in 2003. The *Chronicle of Higher Education* has compiled a listing for fiscal year 2002 – a few of which are included below.

- \$10.4 million – Marshal University (West Virginia) to build the Biotechnology Sciences Center.
- \$19.6 million – Northcentral Technical College (Wisconsin) for a nursing and health care careers building
- \$3.1 million – State University of New York at Buffalo for a Bioinformatics Center.
- \$10 million – University of Alabama at Birmingham for the Interdisciplinary Biomedical Research Institute.
- \$3.4 million – University of Charleston to renovate Riggelman Hall.
- \$10 million – University of Georgia to construct the Paul D. Coverdell Building at the Institute of Biomedical and Health Sciences.
- \$1.7 million – University of Northern Iowa for a Human Performance Center.
- \$4 million – University of Southern Florida to develop a pediatric clinical-research center.
- \$3.9 million – West Virginia School of Osteopathic to expand an ambulatory-care facility.
- \$3 million – Shepherd College (West Virginia) to renovate Scarborough Library.
- \$4.5 million – University of Louisville

(Kentucky) for main library expansion.

- \$2 million – University of Southern Mississippi to build a National Center for Excellence in Economic Development, Education, Research, and Community Service.

Congress has made the federal pork barrel deep and wide enough to fund both seemingly frivolous and essential projects. Does your institution have funding needs? Federal money has been available. The next go around is on or about October 2003. Will you be there for your fair share? Get in line or be left behind.

Herb Ohrt is a vice president at Stanley Consultants, Inc., a Stanley Group company, which provides engineering, environmental and construction services worldwide. Herb can be contacted by phone at 563.264.6301, or e-mail at [ohrtherb@stanleygroup.com](mailto:ohrtherb@stanleygroup.com).

## Editor's Corner

This year's Annual APPA Educational Forum was co-located in Nashville with NACUBO. In my opinion this was one of the best meetings I have been to in the last 10 years. As an attendee you were able to attend both APPA and NACUBO sessions; a great educational opportunity. In 2006, APPA, NACUBO and SCUP are co-hosting a joint annual meeting in Honolulu, Hawaii – a great educational opportunity and an exciting place to visit. I would urge you to start your campaign to attend now.

In less than a month, RMA will be holding its annual meeting in Sedona, Arizona, hosted by our friends from Arizona State University. The program looks interesting and the location is superb. I hope to see many of you there.

This edition of the newsletter has several articles by new contributors; I thank you for taking the time to make the newsletter better. The newsletter is what you make of it; the more contributors I get, the more diverse the newsletter.

Articles can be sent directly to me or Esther Federico (preferably electronically in Word or WordPerfect) at [Paul.Smith@pima.edu](mailto:Paul.Smith@pima.edu) or

[Esther.Federico@pima.edu](mailto:Esther.Federico@pima.edu). The dates for submission of articles for our next two editions are November 5, 2003 and February 4, 2004.

I hope you had a safe and enjoyable summer. I look forward to hearing from you for our next newsletter. I close with a quote from Henri Frederic Amiel,

*"Conquering any difficulty always gives one a secret joy, for it means pushing back a boundary-line and adding to own's liberty."*

## APPA Calendar of Events

### September 10, 2003

TB & HIV Information for Custodial Workers  
Audio Conference

### September 13 - 19, 2003

National Association of Elevator Contractors  
54th Annual Convention & Exposition  
Orlando, FL

### September 14 - 18, 2003

APPA's Institute for Facilities Management  
Palm Springs, CA

### September 21 - 24, 2003

ICMA Annual Conference 2003  
Charlotte, NC

### October 8 - 10, 2003

Custodial Management Association of Texas  
Austin, Texas Radisson Hotel – Downtown

### November 12, 2003

Where's the Beef? The Need for Quality  
Standards (Alan Bigger)  
Audio Conference

*Look for Information  
about the 52<sup>nd</sup> Annual  
RMA Conference!!*



*September 19 - 21, 2004  
Jackson Lake Lodge, WY*

# State/Province

## Canada

### Recruitment & Retention

**By: Mark Calette, Operations Manager  
Wanuskewin Heritage Park**

Like many other members of the RMA, I wanted to comment on the recruitment and retention of qualified workers. In the Saskatchewan area, finding qualified personnel over the last few years has been difficult. During the last 8-10 months this situation has improved, with the economic slow down seemingly adding more workers to the talent pool. The overall situation though, remains difficult. We have noted some interesting developments in our recruitment processes:

- 1) **More does not always mean more.** In our hiring process, we have found that some candidates that meet the minimum professional or trade criteria and have good working experience; have turned out to be excellent employees. From the interview process, we have found some good people that in previous years we may have overlooked because of our past screening methods. Interestingly enough, a few of the people that we have hired with really high credentials have been disappointing. I am not suggesting giving up trying to find the most qualified and experienced people, we have hired some very qualified and experienced people, and will continue to do so. The lesson we have learned during these lean times is to not rely on so much credentials as the only screening method; you may be overlooking good candidates.
- 2) **FM staff wants training.** With tight budgets as far as salaries and wages go, how can you retain good staff? We have found in our area that offering professional development is an excellent way to keep trained staff, and have them be more productive and knowledgeable at their present positions. Some staff have listed professional development as more important to them than salary increases.
- 3) **Flex time.** This has also been a perk that we have found attractive in trying to keep our staff happy and on board. This does not cost anything if closely monitored, and can be effective in keeping employee morale high with the growing trend of budget cutbacks.

Recruitment and retention will always be a challenge for facilities managers. It most definitely means that we will have to continue to be very creative to attract and keep the trained staff we desperately need.

### Wanuskewin Heritage Park HVAC Upgrade

**By: Mark Calette, Operations Manager  
Wanuskewin Heritage Park**

Wanuskewin Heritage Park, a national historic site and park is undergoing a HVAC and Mechanical upgrade. Wanuskewin Heritage Park has been a gathering site for First Nations (Native American) people for thousands of years. Wanuskewin is also a partner with the University of Saskatchewan and is also a satellite campus for the University in the archaeological studies as well as other subjects. The change from a modular heat pump system to an all air system using reheat and VAV boxes is fully underway. A new two million BTU Aerco condensing boiler was installed last year in phase I and the rest of the upgrade is currently underway. A 70-ton Trane chiller will provide the cooling. A new DDC controls system will be employed to manage the new equipment.

This upgrade was necessary due to ongoing equipment failures and to relieve difficult maintenance problems. The design was chosen to improve maintainability and to lower energy consumption. As a Museum it was mandatory to upgrade the equipment to provide a higher standard of air quality and humidity to areas where artwork and exhibits were showcased. A second air handling unit and humidifier were chosen to provide this more restrictive environment to these designated locations.

An update on this project and the final results may be submitted for a later newsletter. In a forthcoming issue of Canadian Facility Management & Design Magazine a full article on this upgrade will be published.

### Athabasca University

**Greg Wiens, Director  
Facilities and Services**

Greetings from Athabasca University, where the weather has been warm and wet for most of May and June and hot and muggy in July. For those of you who like

the great outdoors, the fishing is fine, game is plentiful, sunsets are spectacular and the beverage of your choice is buried in ice.

The past six months at Athabasca University (AU) have been a busy time for the facilities people. As with all institutions internal reorganizations, renovations both large and small, Convocation and day-to-day operations fill up all the available time, and then some.

Substantial completion of a renovation project, started last December with a budget of just under one million dollars, was achieved on May 29, 2003. This meant that moving the occupants into the new space, with all that implies, immediately went into high gear. The moving of the Computing Services group into the renovated space had to be completed prior to June 13, the start of Convocation, and it was. The normal deficiency and warranty items cropped up as they always do in a new or renovated area. An air relief valve leaking onto a new ceiling tile, a door lock that just would not work and an emergency exit sign that was somehow overlooked by the contractor.

Convocation celebrations were on track for June 13 and 14, the high point of our student's years of labour, so all the stops had been pulled out to make sure the buildings and grounds were in tiptop shape for our guests and graduates.

Did I mention that we do not have any permanent structure of sufficient size to seat and cater the estimated 1000 + people who would be present for each ceremony? This required us to assemble and erect a large temporary structure that covers one entire parking lot as the main venue location for the Convocation ceremonies. Up it goes in mid-May and down it comes after the event. Inside this structure all the stages, sound systems, chairs, television cameras, water dispensers and, lest we forget, the red carpet must be assembled, placed, arranged and kept carefully clean, despite the fact that all of this is being located on a parking lot. The podium, kneeler and flower arrangements need to be located, relocated, and then relocated yet again until everything is just right. Building doors need to be removed to provide for a more open and welcoming appearance, washrooms needed to have special soaps, hand crèmes and even fresh cut flowers in vases. Potted and hanging baskets of flowering plants sprout from almost any location where they can be placed or hung. Every floor, window,

handrail and mirror needs to shine with the highest possible gleam.

Mother nature was kinder this year. Unlike 2001, the spring was not hot and dry, hence there were no heavy smoke from forest fires burning less than 40 km away and unlike 2002, the spring was neither late nor cold so the grass was greening nicely. Spring was warm and pleasant with lots of moisture so, other than bountiful weed growth, the grounds were in fine shape.

All was in order and the event was successful as the guests and graduates all went away with a sense of satisfaction from a job well done and a very positive impression of Athabasca University. We all went home, very late on Saturday, slept well and then started taking it all down on Monday.

Just another day in paradise for the facilities staff at Athabasca University.

Stop and check out our website at [www.athabascau.ca](http://www.athabascau.ca). Or better yet, take some holiday time and come for a visit.

## Montana Report

### *Recycling Challenges in Rural Areas*

by Jonathan Ford, Manager of Environmental Services  
Montana State University - Bozeman

Colleges and universities are generally perceived by the public as test beds for both social change and emerging technologies and are expected to show leadership in such areas. Recycling integrates both aspects and there is an obligation for campuses to demonstrate societal responsibility through their recycling programs. As a result, higher education facilities maintenance organizations can often find themselves between the proverbial "A rock and a hard spot" when a campus community's recycling expectations do not take into account economic realities. Nearly anyone can intuitively reach the conclusion that recycling and waste reduction is a smart long term strategy to conserve natural resources and save money. It is harder for people to understand how market forces may conspire to make such a noble goal more difficult in the short term. This is particularly true in rural areas such as Bozeman, Montana.

Montana State University - Bozeman has always been reasonably proactive concerning recycling. Prior to the time when recycling came into favor across the country, the Office of Facilities Services (OFS) was responsible for most of the recycling that took place on campus. Not surprisingly, this consisted of commodities

related to maintenance and construction work mostly scrap metal, old tires, automotive batteries, and yard waste.

Anticipating the growing interest in recycling, in 1990, OFS hired an outside recycling consultant with experience running one of the premier campus recycling programs in the country at Penn State. He outlined a program for MSU recognizing the limitations and opportunities peculiar to both the local and regional recycling markets.

Some of the challenges he identified were:

1. Landfill costs are relatively inexpensive in this region, and are not expected to rise in the near future. Until such costs go up, recycling will not be very attractive economically.
2. Montana State University's production of recyclables, even pooled with that of the City of Bozeman, would amount to a volume too small to lure secondary industrial processors away from larger, urban producers.
3. Long distances to secondary markets (over 400 miles) increase shipping costs substantially, in most cases wiping out any cash returns from the commodity.
4. The existing recycling infrastructure in Bozeman is currently not substantial enough to handle the glut of recyclables a full-scale program at MSU would produce. Phil Melnick, of Institutional Recycling Opportunities, wrote in the report, "None of the recyclers I visited expressed the desire or had the capability (physical facilities, capital, equipment, or employees) to process the amount of recyclables (other than aluminum cans) that I would expect to be generated in Montana State University's recycling program...The bottom line is that in your [MSU's] situation it is difficult to cost-justify a recycling program."

That conclusion left OFS with only a few options in its desire to implement a comprehensive recycling program: the recycling commodities markets had to rise dramatically, or there had to be heavy program support from the State, MSU's central administration, or the students. OFS produced a proposal for a comprehensive recycling program with all the associated costs. Despite repeated requests for additional program support from all the potential contributors, no support has ever appeared. Neither have the markets improved.

Left unfunded and besieged with questions and criticisms from the campus community regarding the apparent lack of a high profile recycling program, OFS opted to take precious maintenance operations monies and apply them to the recycling of newsprint, absorbing the labor costs in the perennially understaffed Grounds and

Custodial departments. Grass roots efforts to recycle among the departments and student groups were encouraged.

About five years ago, the Headwaters Recycling Cooperative, a business heavily subsidized with State funds, appeared on the scene. The Cooperative concept was to have large trucks service very large rural pick-up routes. This provided for the recycling needs of the extremely large rural regions surrounding Bozeman while also generating large enough volumes of commodities to interest large processors. Working in conjunction with the City of Bozeman, the Headwaters Cooperative began to set up drop-off sites around Bozeman. The local recycling business environment was so precarious that with the establishment of these sites, all of the half-dozen or so local recycling businesses folded except one. OFS was successful in negotiating the location of two of the drop-off sites on campus. This provided a no-cost recycling outlet for some campus commodities that were probably never going to be collected, such as glass and magazines.

OFS also worked out a deal with the lone remaining recycling business to locate a roll-off container for the collection of cardboard from the MSU food services. All OFS had to do was pay the yearly liability insurance fees (a few hundred dollars) required by MSU for the contractor to come onto campus. This also cleared the way for departments to make their own pick-up arrangements with the same recycler if they chose to pay his pick-up fee. Recently, another roll-off container was added under the same arrangement to provide a collection point for the white office paper collected by the student-run MSU Recycling Club.

Despite the obstacles, ample opportunities for recycling exist at MSU. The list of materials captured at almost no cost is surprising. It shows what can be accomplished with the collaborative effort of interested people in an environment that is not particularly conducive to recycling. The simple addition of some minimal funding would enable the campus to obtain the level of convenience necessary to maximize participation.

#### *List of Recyclables Captured at MSU - Bozeman*

**Paper Products:** newsprint, white paper, corrugated cardboard, magazines

**Containers:** aluminum cans, steel cans, glass bottles

**Automotive:** crankcase oil, batteries, anti-freeze, parts cleaners, used tires

**Other:** scrap metals, light tubes, refrigerants, concrete, asphalt, road sand, old computers, yard waste (composted)

## Wyoming Report

By Frank Fox

"U Make It work" Recycling at the University of Wyoming is preserving the environment for the future. The UW Recycling specialist and UW students manage the program as a small business on the UW campus.

The Recycling Program provides work study and employment opportunities for UW students.

Students work in all phases of the program including the collection and sorting of commodity, presentations, education, research, marketing and publicity.

Recycling means less trash going to the landfills.

But the greatest environmental benefits of recycling are related not to landfills but to the conservation of energy and natural resources and the prevention of pollution when a recycled material, rather than a raw material, is used to make a new product. In an average two week period, UW Recycling keeps more than 12 tons of paper out of the landfill, saves energy, reduces air and water pollution, reduces greenhouse gas emissions and conserves natural resources. Recycling one ton of white paper saves 24 trees, and one ton of plastic bottles saves 7.4 cubic yards of landfill space. The recycling efforts of the University of Wyoming are improving the environment every day. With the university community's continued support, the results are clear: cleaner air and water, less pollution, more forested land and open space and reduced greenhouse gases. Hence the slogan: "U Make It Work!"

Items accepted for recycling are: aluminum cans, printer cartridges (large and small), green bar paper, black and white paper, newspapers, magazines, shredded paper, plastics #1, books and office pack (all kinds of paper products, file folders, junk mail, etc.)

In an effort to improve the appearance of the north side of the main campus (which was quite successful) the Physical Plant planted 134 cottonwood trees bordering two new streets on campus along with the trees a drip irrigation system was also put in place all being fed off well water. The water consumption was estimated to be a mere 900 gallons per week.

During this project several items of equipment, not in the Physical Plant inventory, were rented creating a real time savings. Nothing like the right tool for the job.

Currently the drought situation is on hold, all water restrictions are voluntary. If

our weekly precipitation will last through September we should have it made.

On the downside our football stadium is in dire need of major structural repair and as normal, the dollars to undertake this task have yet to be identified.

## Utah Report

### University of Utah Recycling

by Garth N. Peterson

Recycling at the University of Utah is a voluntary effort that is coordinated and subsidized by Plant Operations. Staff, faculty, and students may place recyclables in appropriate containers by choice, not mandate. Since the inception of a campus-wide program in 1992, collected materials have shown a steady increase from 105 tons to a high of 202 tons in 2001.

Despite promises of a paperless society with the advent of computers, most of the campus waste stream is increasingly paper. Fifty-five gallon, rolling containers are placed in every building where caring individuals may empty desk-side collection boxes. Newspaper recycling bins are placed near student paper boxes, and aluminum cans may be deposited near vending machines.

Each week, custodians place rolling containers at curbside. A contract service provides trucks with mechanical pickup to dump the containers and broker the paper. The avoidance of manual labor, storage, compaction, and delivery is a positive result of this program.

Newspaper is collected manually to central, front-end loading bins where it is picked up by a contract service as needed. Aluminum cans are gathered and stored in a roll-off bin owned by Plant Operations. Delivery is made where the price is best.

Salt Lake City recently reported to residents that its, "recycling program costs money." As with many other state entities, recycling at the U of U does not pay for itself. Still, avoidance of landfill fees, payments for aluminum, and volunteer effort combine to keep costs as low as possible, enabling the administration to provide a means by which people who choose may recycle.

## Colorado Report

### Recycling and Waste Reduction

by John Bruning

When the topic of recycling was suggested for this edition of the Rocky Mountain Views I got excited because it gives me an opportunity to "blow my horn" a bit about our program here at the University of Colorado at Boulder (UC-B). Although 75% of the nation's colleges and universities have recycling programs, we believe that the unique partnership between the CU Environmental Center, Department of Facilities Management and Housing Department is a model of what campuses can and ought to do. Recycling efforts were initiated by the CU Environmental Center in 1976 and in 1991 the UC-B Chancellor formed a Student-Administration partnership that has recently been expanded to include the Housing Department. In 1999, the Office of the Federal Environmental Executive recognized UC-B as the Nations Model Campus Recycling Program and, in 2000, the EPA issued UC-B the Climate Protection Award.

Here are some interesting statistics about our program (this comes from a recent white paper on CU Recycling:

- For every ton recycled in academic buildings, CU Recycling saves the University \$315.00.
- Every dollar spent on recycling in academic buildings is comparable to spending \$2.12 for landfill disposal.
- Over 1,400 tons will be recycled at UC-B this year, diverting approximately 30% of campus waste from landfills.
- Materials are collected from 10,000 desk-side and 750 central locations.
- 2003 survey results indicate participation rates of 70% to 100% of faculty and staff.
- The Facilities Management and Housing departments compost over 200 cubic yards of grounds waste annually.
- Facilities Management recovers 90% of scrap metal for recycling.
- Over 20 cubic yards of reusable clothing, books, and appliances are collected from residence halls and donated to local civic groups for resale each year.
- Over three million pounds of concrete, asphalt and other demolition waste were recovered last year. Since 1980, UC-B has recycled over 16,000 tons saving the equivalent of 158,00, 40' Douglas Fir trees, 215,000 gallons of gasoline and 559,000 pounds of air pollutants.
- Last year recycling provided a net saving

to the campus of \$175,00 compared to hauling and landfilling waste.

Despite relatively low recycled materials market prices last year, UC-B realized a profit of \$45,000 that was reinvested into education and outreach initiatives.

The CU Environmental Center/Administration Partnership includes collections, hauling and sorting recyclable materials in an on-campus intermediate processing facility (IPF) and sale of high grade recycled materials to a vendor. The Department of Facilities Management is responsible for desk-side and recycling station collections and the hauling of those materials to the IPF. Student workers, overseen by the Physical Plant Environmental Operations Manager, sort the materials into containers which are then picked up and weighed by a contract recycling buyer. CU Recycling earns the revenues generated through the sale of the recycled materials while Facilities Management realizes significant cost avoidance from land fill costs and other tipping fees. It's a winner for everyone AND the right thing to do!

## Arizona Report

### Arizona Western College Facilities Management

By **Bill Smith, Director of Facilities Planning and Management**  
**Paul Schroyer, Director of Maintenance and Operations**  
**Sharon Register, Director of Risk Management**

The Arizona Western College Facilities Management Department (FM) consists of 42 full time employees tasked with providing custodial, grounds keeping, maintenance and repair of all equipment and facilities on the main Arizona Western College (AWC) campus, including Northern Arizona University facilities located in Yuma. Facilities support services are also provided for the Downtown Career Center opened in August of 1999 adding an additional 22,000 square feet to the campus. Maintenance support for 33,700 square feet at the La Paz and Vocational Centers in Parker is provided by both contractors and AWC employees assigned to the La Paz Center facility.

FM maintains over 420,000 square feet of working and living space for the main campus located on 435 acres of federal land conveyed to AWC for educational purposes. Additionally, AWC maintains 55,700 square feet of instruc-

tional space located in downtown Yuma and Parker. The department has an operations and maintenance budget of approximately \$3,000,000 and a capital improvement budget for Fiscal Year 03-04 of \$1,426,000. The Director of Facilities Planning and Management (DFP&M) is responsible for the funding, development and implementation of the three-year Capital Improvement Plan (CIP) and the 2000-15 Facilities Master Plan.

FM also has responsibility for environmental and safety (OSHA) compliance and the loss control program throughout the campus. The Director of Risk Management, under the direction of the DFP&M, provides all mandated programs. These programs include responding to minor hazardous waste spills, disposal of hazardous and bio waste, asbestos abatement, facility safety audits, chemical hygiene and the college's indoor air quality program. Further information can be obtained by calling (928)314-9474 or viewing the Safety Management program on the web site.

The DFP&M is also responsible for ensuring compliance with the AWC Space Management Plan and participates in the reallocation of floor space when there is a change in function or intended use of space. He also functions as Project Manager for all CIP projects and facilities-related partnership issues with other educational and government entities.

The Director of Maintenance and Operations (DMO) has responsibility for all emergency, routine and preventive maintenance and repair required for campus facilities and equipment. Utilizing a state-of-the-art computerized maintenance management system, Datastream MP-2, the DMO prioritizes, tracks and monitors all unscheduled, routine, predictive and preventive maintenance activities to ensure the facilities at AWC are of the highest quality possible.

Our employees take pride in supporting the educational goals of AWC and strive to provide the best facilities available in order to fulfill our most important responsibility, meeting the needs of our students and community every day.

### Combined Heat and Power at the University of Arizona

By **Bill Wilson, Assistant Director Facilities Management, Utility Management Services**  
**University of Arizona, Tucson**

The University of Arizona has a combined-heat and-power system (CHP) on each of our two campuses. Each

system is comprised of a combustion (natural gas) turbine, a steam turbine, a generator, and a heat recovery steam generator (HRSG). These components combine into a system that enables us to produce electricity and harvest the heat that is created by the electrical production and convert it into 125psi steam. Once the HRSG harvests the exhaust heat from the combustion turbine and produces the steam, it is either sent out to process, or the steam is routed back to the steam turbine, which assists in driving the generator. The generator has an input shaft on both sides so that both the combustion turbine and the steam turbine can be attached to the generator; the attachment on the steam side is done through a clutch unit that can disengage the steam turbine when it is not in use. The capability of utilizing the steam produced from exhaust heat in two different ways enables us to choose the most efficient use of that steam at any given point in time or climatic condition.

The Main Campus system has a seven-megawatt capability. This generator operates in parallel with the local electrical utility and is electrically connected to the University's Main Campus electrical distribution system at 13,800 volts. The steam output from this system is connected to the Main Campus steam distribution system when it is not helping in the production of electricity.

The second system has a five-megawatt capability. This generator is electrically connected to an island load.

*At this point, I need to take a moment and explain The University of Arizona's chilled water system. The University of Arizona has an expansive chilled water production system that spans both campuses via a distribution system comprised of over seven miles of tunnels as well as direct buried chilled water piping. There are three different chilled water production plants that are hydraulically interconnected: the largest of the three plants is called the Central Refrigeration Building (CRB).*

This production plant, CRB, is not connected to the public utility; the only source of electrical power to this site is the 5-megawatt CHP system that is physically located at the steam and chilled water production plant located on the Arizona Health Sciences Center (AHSC) Campus. The steam from this system is utilized at the AHSC plant while the electricity produced is sent to power the CRB facility to produce chilled water for both campuses. With over 10,000,000 square feet of building space to cool there is sufficient cooling needed to provide load for the 5-megawatt system at all times.

**The ROCKY MOUNTAIN ASSOCIATION OF PHYSICAL PLANT ADMINISTRATORS OF UNIVERSITIES AND COLLEGES** was organized in February of 1953 for the purpose of promoting the common interest in the planning, maintenance and operation of physical plants of Universities and Colleges in the Rocky Mountain Region: to foster a professional spirit among those engaged in this work; and to support and supplement the activities of its parent organization, the "Association of Higher Education Facilities Officers (APPA)." The Rocky Mountain Region encompasses the states of Arizona, Colorado, Montana, New Mexico, Utah, Wyoming, and in Canada the Provinces of Alberta and Saskatchewan and the Northwest Territories.

### **REGIONAL OFFICERS 2002-2003**

President (Acting)	<b>David Brixen</b>	Arizona State University
First Vice President	<b>David Brixen</b>	Arizona State University
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Junior Representative	<b>Paul Smith</b>	Pima Community College

### **FUTURE MEETINGS**

2003 Annual Meeting	Sedona, AZ	Arizona State University
2004 Annual Meeting	Jackson Lake Lodge, WY	University of Wyoming
2005 Annual Meeting	To be Announced	Colorado State University