Rocky Mountain Views
Rocky Mountain Association of Higher Education Facilities Officers

Spring 2003

inside...

President's Message

Ah, yes springtime! A time to recharge the spirit. Throughout the winter your RMA and APPA committees and board members have been working hard to offer its members exciting programs, research materials and educational opportunities for the summer and the upcoming year. I have highlighted some of the more significant matters of business that will be of interest to our membership:

- The APPA Center for Facilities Research (CFaR) is being rolled out in Nashville this summer. Harvey Chace, University of New Mexico, has been RMA's representative on the Information and Research Committee working on the CFaR.
- The RMA board has allocated $10,000 for regional training programs this year. Polley Pinney, Arizona State University, is our contact for those interested in obtaining further details.
- The RMA board is pleased to announce the following 2003 Scholarship Awards:

APPA Institute for Facilities Management

- Keith Toupin - University of Calgary
- Jim Hill - University of Colorado at Boulder
- Thomas Arnold - Phoenix College
- Albert Herrera - Pima Community College
- Dwight Kawulok - University of New Mexico
- Robert Andrus - Salt Lake Community College

APPA Leadership Academy Scholarships

- George Eckhardt - Colorado College
- Mike Rogers - University of Calgary

- A sincere and special thank you to John Morris, RMA historian, Colorado State University, is finishing an update of the history of the RMA which will be published to commemorate the 50th Anniversary of RMA. Copies will be available at the 51st Annual Meeting of RMA at Sedona, Arizona this September.
- The RMA Board voted to change RMA's fiscal year from July 1 thru June 30th each year to September 1st thru August 31st. This change will allow the board to report more timely financial information during the annual meetings in September.

I would like to take this opportunity to tell you that I will be resigning my position as President for RMA. A new career path has now led me in a different direction other than Higher Education Facilities Management. It has been a privilege and rewarding experience for me to serve on the RMA board. Thank you all for this opportunity. Please allow me to thank the RMA committee and board members for all of their dedication and commitment to RMA. A special thank you to Theresa Pawelko, Angie Klaver, Brad Knudtson, Deanna Hautz, Brad Fowler, Silvio Adamo and Wayne Stevens for their relentless dedication towards hosting our 2002 Annual Meeting and Conference in Banff last year. All in attendance will remember their dedication to excellence with the fondest of memories.

On behalf of the RMA board I would like to announce that David Brixen, Arizona State University, will be assuming my duties as President for the remainder of my term. As David is currently the 1st Vice President he will now become President for a term longer than one full year. I sincerely appreciate David taking on these additional responsibilities.

I encourage all of you to register early for the Annual Meeting in Sedona this September that David and his team are hosting. The conference theme is "Golden Prospects", a celebration of 50 years of RMA. I visited Sedona during the Spring Board meeting in April and I ensure you that David and his team have planned a truly magnificent conference and venue for all to enjoy. Happy Prospecting!

Steve Baldick
RMA President

Tribute
Brian Jay Anderson

On Thursday, April 24, 2003, Brian Anderson passed away suddenly and unexpectedly at his home. Brian at the time of his death was employed with Utah State University in Logan, Utah. He was the director of Facilities Operations where he enjoyed a close relationship with the many trades. Brian also enjoyed many other associations and friendships throughout the University and enjoyed an uncommon mechanical and technical aptitude as well as a keen intellect.

Brian served his community as well as his church serving as a full time missionary for the Church of Jesus Christ of Latter Day Saints teaching the Navajo people in Arizona. With the church he served in the bishopric of one of the youth wards working with students up to the time of his death. Brian lived a life of service and loved to be with and work with those needing help.

Brian took on many challenges within in RMA and APPA and gave whatever time and energy necessary to complete the task. He was always thorough and completed every assignment asked of him or for which he volunteered. His association and insights will be definitely missed.

He married Sheri Hillyard May 7, 1976 in the Logan LDS Temple. Sheri and Brian were instrumental in the success of the RMA conferences sponsored by Utah State. They enjoyed a daughter Mauren and son-in-law Scott Brown also living in Smithfield, Utah. Our warmest thoughts and wishes go out to Sheri and her family letting her know Brian had many friends. Brian lived a life full of service and he will be missed. Brian Jay Anderson August 15, 1954 to April 24, 2003, He was 48.

APPA Calendar of Events

June 8 – 12
APPA's Leadership Academy
Rancho Mirage, CA

Jun 11, 2003
Blood-borne Pathogens
Audio Conference

July 9, 2003
Latex Update: Allergy or Not?
Audio Conference

July 21 – 27
NCSL 2003 Annual Meeting
San Francisco, CA

July 27 - 29
APPA's Educational Facilities Leadership Forum
Nashville, TN

August 5 – 8
National Collegiate CADD Conference
Washington, DC

August 13, 2003
Fighting Absenteeism
Audio Conference

RMA 50th Anniversary Celebration
September 17 – 20, 2003

Remember to mark your calendars now for the RMA 50th Anniversary Celebration Sept. 17 – 20, 2003 in beautiful Sedona, Arizona.

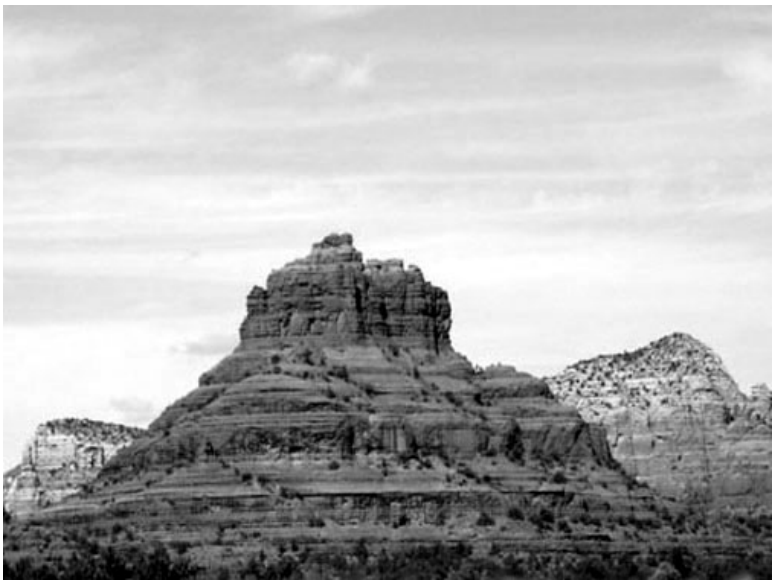
Plans currently include a trip to one of the seven wonders of the world, our breathtaking Grand Canyon, and educational sessions on the latest in technology and techniques for Facilities Professionals.

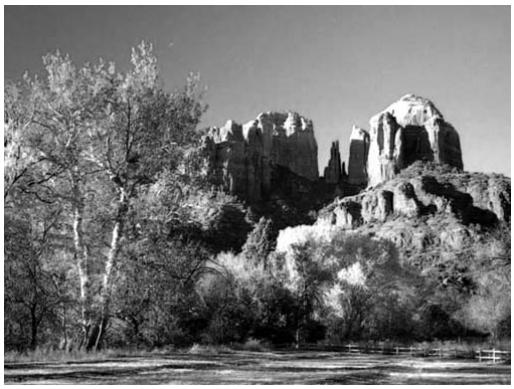
Join us as we celebrate and honor our past and look with excitement to our future. We look forward to welcoming you to beautiful Arizona. If you have questions, please contact Polly Pinney (480) 965-6109 or Dave Brixen (480) 965-7687.

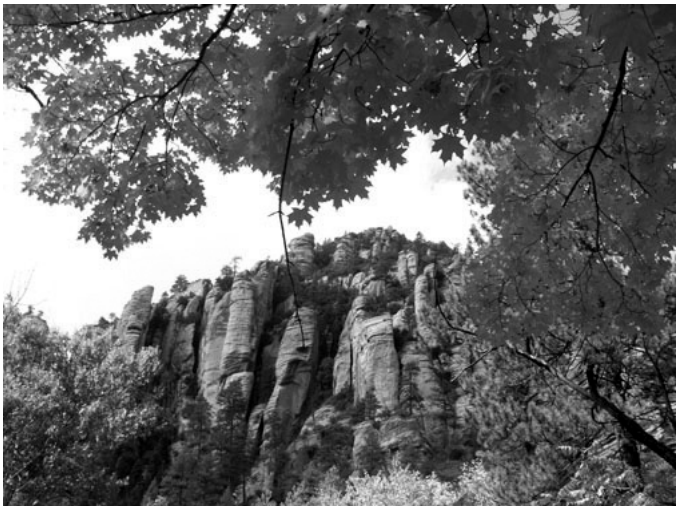
See you all soon.

RMA 50th Anniversary Celebration
September 17 – 20, 2003
http://fmis.fm.asu.edu/GoldenProspects.html

Golden Prospects
Sedona, Arizona







State/Province Reports

Montana Report

Submitted by Jeff Butler
Manager of Campus Maintenance
Montana State University, Bozeman:

Employee training allows our organizations to be more productive and effective in meeting our customer's service expectations. As professionals in the facilities industry know, one of the primary challenges we face is the matter of hiring and retaining qualified workers. Our employees (new and existing) require additional training to stay current in their trade and improve their ability to perform.

As we are challenged with budget reductions, maintaining an educated and well-trained workforce becomes more difficult. There are five basic steps that MSU follows to ensure that our extremely limited resources are being used efficiently. The First Step is to perform a *needs assessment* to determine which work groups require training and which individuals within the group should be selected to receive available training. Once training needs have been identified, training *objectives and priorities* must then be established (Step2).

At Montana State University, we use the following principles to determine priorities and make cost-effective training investment decisions:

Highest Priority Training:

- Required by the University, regulatory agencies or by licensing tenets.
- Required for currency (by mandate, safety convention, certification, etc.)
- Required to accomplish a top-priority strategic goal critical to the OFS mission (such as a particular organizational or professional development need).
- Required as a contractual requirement (such as per Collective Bargaining Agreement).

Median Priority Training:

- In an area of rapid technological obsolescence, transition or evolution (such as data processing, fire alarm controls, HVAC-R controls, elevator controls, etc).
- Needed to replace expertise being lost due to specific employee resignation or retirement.

Lower Priority Training:

- In an area/trade experiencing slower evolution, or longer-term change (such as a transition in systems or equipment that might occur piecemeal over several years).
- In an area of optional knowledge or very limited impact (such as alternative materials or procedures, new equipment demonstrations, etc).
- In an area/trade that is generally static or subject to little/gradual change.

An equally important consideration when prioritizing training is how to accomplish efficient and cost-effective training. It is possible that a high priority, but expensive training option might be foregone, while a low priority option that is inexpensive might be pursued. Managers should seize opportunities to incorporate training into acquisition activities/budgets such as new construction projects, purchases of capital equipment, and/or first-time use of new products or technology. In the case of contractual training requirements, it is critical that such requirements be: 1) Clearly defined and specified (what, where, when, duration, by who, class size, subject depth, etc.); 2) Be enforceable and enforced; 3) Be achievable relative to scheduling and personnel availability, and; 4) Be coordinated by the facilities construction liaison to ensure that the training actually gets done.

Step 3 is to *implement* the training by selecting the delivery method that best suits your conditions. Training methods we consider include: 1) On-site training where hired trainers or product representatives are used; 2) Off-site training where the employee(s) travel to manufacturers, vocational schools (quite often the most expensive and limited choice); 3) Video/voice (taped or interactive) sessions; 4) internet based classes, and; 5) training with in-house resources.

The most common type of training at all levels in an organization is on-the-job training (real time training). Whether or not this training is planned, much of what employees learn comes from their job experiences. The employee's direct supervisor, co-workers, or both usually engage in on-the-job training training. These trainers must be knowledgeable, and able to teach and show the employee what to do.

For effective *transfer of training* (Step 4) to take place from the classroom to the job, three conditions must be met. First, trainees must be able to take the material learned in training and apply it to the job they perform. Second, use of the learned material must be maintained over time, or in other words - practiced. Third, managers must consider how well the knowledge can be imparted to other personnel who did not receive first-hand training. Resource allocations should be made considering the methods and/or personnel that will be most effective in disseminating training knowledge to others in the workforce since employees receiving training may be tasked with presenting the subject material to other employees. These points are important when determining who should be selected to participate in training opportunities.

Due to the fact that training is both time-consuming and costly, evaluation of training programs should be done periodically. *Evaluation of training* (Step 5) compares the post-training results to the intended goals and objectives. Tracking and logging of training activities is necessary to ensure best use of resources and to document any regulatory, or contractual requirements. Methods of evaluation might include pre and post-training matrices, testing for knowledge, or simply asking the employee for his/her reaction to the training session upon its completion.

In its simplest form, Performance = Motivation x Ability. Although training has a direct effect on an employee's ability to perform their duties, it can also motivate an employee. Our willingness to invest in our employees' professional and technical advancement also demonstrates their importance and value to the organization. Since employee training allows us to improve performance and more effectively meet our customer's expectations, it is important that we spend our resources wisely to provide high quality, effective training opportunities as often as possible.

Wyoming Report

Frank Fox

With the retirement of Dr. George F. Krell on June 31, 2002, Michael Milam the Physical Plant Senior Project Coordinator took over the reins as the Acting Director of the Physical Plant and turned in a stellar performance. As of April 21, 2003 Richard D. Byers, Jr. formerly of Purdue University took over the duties as Director of Physical Plant at the University of Wyoming. Richard comes to us with a very extensive background in construction and facilities management – welcome Dick. Michael is now serving as the Construction Projects Manager for the Division of Physical Plant congratulations Mike.

In the skilled trades, training is conducted either on campus or off depending on the vendor putting on the demonstration. Contracting out is dictated by any of three variables: if the scope of the project is over $200,000, if scheduling cannot be met due to a lack of staff, or if the particular trade/skill is lacking in house such as sheet metal work or roofing. A particularly good source of information has been the Physical Plant Craft Association.

Despite the recent heavy snow falls the impending drought continues to be a topic of real concern both to the City of Laramie and the University.

The City has prepared a water use restriction plan that the University will abide by which calls for an initial reduction of water consumption by 20%. This is to be achieved by: irrigation from private wells must be posted at a point visible from the street (61% of the campus is watered using untreated well water from the Forelle Limestone Aquifer); restaurants can only serve water on request; watering is prohibited between 9 a.m. and 7 p.m.; cars can only be washed with devices that have shut off valves; there is to be no washing of hard surfaces such as concrete drives, patios, etc; lodging establishments are to restrict laundry services; limit irrigation so as to keep landscape vegetation alive; there is a moratorium on new turf establishment.

The University has recently completed negotiations for a natural gas supplier for the University and for the first time this rate with a ½ cent per therm increase is being made available to the current University employees as well as retirees.

Utah Report

Dixie State College
St. George, Utah

The Dixie State College Custodial Department continues to meet the challenge and demands of increased quantity of work, a desire to provide quality work and most importantly the need to maintain the moral of the personnel. Bob Reed, Custodial Supervisor for Dixie State continues to meet these goals during these economic crunch times by strictly organizing employee time, training and wise budgeting. His attention to employee training and good equipment helps him accomplish the job goals.

The Custodial Department has one full time custodian for every two or three buildings. To assist with the work, several part time employees are assigned to each

Custodian. Unfortunately the turn over with part time help is very high, so good training accomplishes a lot. One of our full time custodians is designated as a trainer for part time employees. A training guideline, developed by the Supervisor, covers everything from filling out time cards to maintaining equipment. It assures that everything is covered with each new employee. For full time employees there is a weekly new product and update training session. During this hour subjects such as new equipment, carpet care, and facility cleaning procedures are reviewed. Twice a year we have a supplier representative come to our campus and instruct us on topics such as " The Chemistry Behind Chemicals" and "Hard Floor Care". Employees having up to date instructions and frequent refresher courses feel more confident with their job and the College receives quality productivity.

As chief supervisor Bob Reed relies on proper equipment for the job for increased impact on productivity, having the right tool for the job generates cleaner buildings, and employees also appreciate and respond to it. The following list is of equipment that has helped our department.

A. Chemical dispensing, UMB, in one custodial closet per building has really saved time and money. These systems automatically mix the chemicals, keeping the "more is better" problems to a minimum.

B. Backpack vacuums have become increasingly popular with our custodians. They require minimal moving of chairs and tables. Less weight to move back and forth keeps down fatigue. Also, fewer "Dust Bunnies" are left behind.

C. Auto scrubbers are a must. We clean our concourse at the sports arena in about on fourth of the time it took with the standard floor machine & mop and that's just one area.

D. Mini extractors are great for pop spills and small stains. Our Campus provides soft drink dispensing machines in just about every building, which increases spill occurrences.

E. Electric man lifts are replacing manual ladders. Manufactures have designed them so they can traverse thought standard interior doors. Some can also be moved while fully extended in the air. Cleaning high windows and replacing burned out lamps requires less manpower and is safer.

F. The (new for us) battery operated motor scrubbers are great for getting behind toilets and cleaning walls.

At Dixie State College we are finding new, efficient equipment and work saving devices all the time. Our College buildings are a great investment for the State. Good training and right equipment can help maintain that investment.

Colorado Report

By John Bruning

Strategies for the Skilled Trades in Tough Times

It's hard to look back on the late nineties and say they were the "good times", but compared to post 9/11, they are looking pretty good! With the possible exception of Wyoming, I haven't talked to anyone in the RMA region who hasn't fallen on tough financial times. For many of us this has meant layoffs and significant budget reductions. Many positions, vacated through attrition, have been gobbled up to feed the budget monster, including skilled trades. As we are typically restricted from filling these vacant positions or expected to fill them with lower paid/lessor skilled technicians, this has placed an increased burden on our staffs.

One strategy that has really helped mitigate this problem for us is that we have historically tried to hire technicians with multi-trade experience. Pipefitters who also weld, steam fitters who know plumbing, carpenters who have experience in masonry, HVAC technicians who know DDC and water treatment, etc. These skills don't come at bargain prices, but I'm convinced that in tough times the contributions of these multi-talented technicians make a positive difference.

One trend that's actually an advantage for us right now is a deep and hungry labor pool. A few short years ago we would only have a handful of applicants for our vacant skilled trades positions. In many cases, that applicant pool was weak in experience and skill, but still expected top scale pay to start. It was very much a "seller's market". Recently, for the few skilled trade positions that we've actually been able to recruit and hire, the applicant pools have been some of the best we've ever seen…multi-talented, experienced, highly trained and educated. There also seems to be a greater willingness on the applicant's part to accept mid-range compensation.

Skilled trades' folks always appreciate the finest tools and equipment you can afford and we've never wavered when

it comes to providing the best tools to do the job. Not only does it improve the efficiency and quality of the work, it also is a big morale booster. We recently purchased a *Timesaver* sanding machine for our carpenter shop. What used to be a time consuming physically demanding task with a belt sander has now been made as simple as setting the controls and watching the material move through the machine. In addition to good tools, it is even more important than ever to keep technical skills as sharp and up to contemporary standards as possible. An ongoing technical training program is an essential element to keep our skilled trades staff motivated and effective.

Another strategy during tough times is a strong marketing plan. When the times were good, we waited for "recharge" and auxiliary-funded work to come to us. Now, we realize we have to get out in front and make sure that our customers know what rechargeable services and products we can offer them. We do free estimates in our in-house projects and fabrication shops and routinely send out flyers and other communications designed to keep those shops busy. We've also discovered an emerging market in the facilities condition audit area, as we have contracted to perform these audits for several of our auxiliary departments.

I still value the advice that my father gave me when I was a teenager, "Go to college, join the military or learn a trade and you'll have a job for the rest of your life". Well, I didn't join the military, but I took his advice on the other two and I've always had the confidence that my trade would serve me well and it has. I miss the tangible outcomes of working with my hands, but have learned to resist the temptation to jump in and mill some wood or operate a piece of equipment…but it sure would be fun sometimes!

Hazardous waste is becoming a critical issue on college and university campuses. In 1999, EPA Region 2 began focusing its attention on colleges and universities. There is an article which can be accessed via www.epa.gov/region02 then be clicking on compliance and then colleges, which details this EPA region's increased scrutiny of colleges and universities. The following fines/citations are referenced in the article: $301,000 complaint against Manhattan College and $39,599 fine against Raritan Valley Community College.

This is the background regarding hazardous waste issues.

Hazardous Waste Issues in Laboratories

Managing hazardous wastes generated in analytical laboratories is easy. Managing them in accordance with the required RCRA regulations is not. If you haven't seen it, EPA has issued a pretty good guidance document for personnel who work in analytical laboratories. *Environmental Management Guide for Small Laboratories*, EPA/233/B-00/001, May 2000 can be downloaded from http://www.epa.gov/sbo/labguide.htm. It discusses compliance issues in the laboratory setting for all environmental areas, not just RCRA. Although not specifically mentioned in EPA's guide, we have seen the following RCRA compliance stumbling blocks in laboratories:

Bottles of pure, unused chemicals that will be disposed typically carry P- and U-listed hazardous waste codes. Even if there are just a couple of inches of unused chemical left in the bottle, the hazardous waste codes apply. A really useful tool for determining applicable P- and U-listed hazardous waste codes is EPA's List of Lists (which may be downloaded from http://www.epa.gov/swercepp/pubs/title3.pdf). This list of chemicals is much better alphabetized than the P- and U-lists in §261.33 of the federal RCRA regs.

Calibration standards that contain only one analyte (and that chemical is on the P- or U-list) typically carry the corresponding P- or U-listed hazardous waste code when disposed. This is true even if the P- or U-listed chemical was diluted in water, acid, base, or solvent. Even if the solvent used to dilute the chemical is on the U-list, only the P- or U-listed code associated with the analyte is used.

Solvents in the F001–F005 hazardous waste listings are often used for analytical and research work (e.g., in liquid chromatography, rinsing slides, in ion-exchange columns, in layer separations, as the final step of organic synthesis). If the solvents are used to solubilize or mobilize other constituents, the wastes produced are F001–F005 listed spent solvents.

Wastes that carry listed waste codes (such as those noted above) may also exhibit one or more of the hazardous characteristics (ignitability, corrosivity, reactivity, and/or toxicity). The rules for when characteristic codes must be carried are in §268.9(b) of the federal RCRA regs.

Waste samples collected for analysis purposes are conditionally exempt from the hazardous waste storage, manifesting, and treatment requirements. EPA's goal is to reduce the regulatory burden for people who manage these types of samples. However, once the excess sample exits

the analytical sample loop, the exemption is lost, and, assuming the excess sample will be discarded, it is a solid waste that must be characterized as to its hazardousness. Product samples stored even for a long period of time for quality assurance reasons are not wastes at all, but products.

Table 1 exemplifies some of the above discussion by providing typical examples of laboratory wastes and their corresponding hazardous waste codes (if any).

Table 1 — Hypothetical materials managed in a laboratory	Hazardous waste code(s)
Bottle of unused cadmium chloride that has passed its expiration date; to be lab packed for offsite disposal	D006
Bottle of unused 1,1-dichloroethane (flash point 20˚F) that has passed its expiration date; to be lab packed for offsite disposal	U076, D001
Sample of wastewater treatment sludge from electroplating operations; stored temporarily pending conclusion of an enforcement action	Nonhaz[1]
Sample of copper cyanide, which is manufactured at the facility; stored indefinitely for customer product quality assurance reasons	Nonhaz
Excess calibration standard consisting of hexachloroethane (active analyte) dissolved in methanol; to be lab packed for offsite disposal	U131[2], D001
Waste acid solution (3 parts hydrochloric acid:1 part nitric acid)	D002
Waste methylene chloride used to extract organics for semivolatile organics analysis; dumped in sink	F002[3]
Waste aqueous-phase extract from semivolatile organics analysis; dumped in sink	Nonhaz[4]
Incidental losses of unused chloroform from laboratory operations; dumped into sink	U044[3,5]
Container of HPLC instrument effluent waste; contains 95% acetonitrile (flash point 45˚F) and 5% isooctane (flash point 20˚F); to be sent offsite for disposal	D001

[1]Per §261.4(d). However, once this material is destined for disposal, it would be F006. [2]The D034 code does not apply because of §268.9(b). The F003 code does not apply because of EPA guidance in FAXBACK 11523 (go to http://www.epa.gov/rcraonline, click on Advanced Search, and enter the five-digit number in the Fax-On-Demand Code data field).
[3]Although the de minimis wastewater exemption at §261.3(a)(2)(iv)(E) allows toxic listed wastes from laboratory operations to be discharged to the wastewater treatment system, this is not a recommended practice. Such chemicals may pose a fire hazard in traps or drain lines, and they may be hazardous to human health from vapors or fumes. Dumping excess chemicals or calibration standards down sinks may also result in exceedances of CWA permit limits (either NPDES limits or pretreatment standards). Chemicals resulting from laboratory operations should be segregated based on chemical compatibility, collected in satellite accumulation or 90-day accumulation containers, and then lab packed or otherwise disposed offsite.
[4]Per EPA guidance in FAXBACK 11437 (go to http://www.epa.gov/rcraonline, click on Advanced Search, and enter the five-digit number in the Fax-On-Demand Code data field).
[5]The D022 code does not apply because of §268.9(b).

Note that, when shipped offsite, hazardous wastes usually need a manifest (unless the lab is a conditionally exempt small quantity generator). Accompanying at least the first shipment of the waste must also be an LDR notification form [see §268.7(a)].

For a free, downloadable Lab Pack LDR Notification Form, go to the following site www.mccoyseminars.com and scroll down to the Frequently Requested Forms link.

Rodger Goffredi, P.E., McCoy and Associates, Inc., Golden, CO 80401

New Mexico Report

By Harvey Chace
University of New Mexico
Associate Director, Maintenance and Construction
Physical Plant Department

Recruiting and Retaining Trades Personnel

One of the great challenges facing Higher Education's facility maintenance managers (right behind budget reductions and a rising backlog of deferred capital renewal) is the recruitment and retention of skilled technicians. Often higher education physical plants are handicapped in their recruiting efforts by caps on university non-exempt wages and by mandatory retirement contributions. Highly-skilled, well paid, construction trades workers generally prefer higher wages over deferred compensation. Anecdotal evidence of physical plants' recruiting difficulties include a posting for a master level HVAC technician at standard university trade shop wages that went unanswered for nine months. Where plant directors must resort to contract services to maintain state-of-the-art-building systems, they lament the loss of control and the high costs associated with high-tech outsourcing.

One solution to the trades technician shortage is to grow your own. At the University of New Mexico campus, we have changed our focus from recruiting top talent to attracting unlicensed and relatively inexperienced trades candidates who have a proven work ethic and have already made significant self improvement efforts. Identification and recruitment of this class of candidate has proven to be much easier than trying to skim the top of the labor market. We have improved our retention of these "new-age" recruits by matching their appetite for career advancement with a career ladder program that rewards academic achievement, superior job performance, and attainment of state trades craft competency credentials.

The vehicle that most improved our staffing efforts was the introduction of the Facilities Services Technician position. In other venues, it may be called a General Maintenance Mechanic, or a Trades Helper. The UNM variation on the theme is slightly different in that we offer an unlicensed, but high-potential candidate, a starting wage that is very competitive with entry-level compensation at local electrical, HVAC and plumbing service firms. We have further enhanced our recruiting efforts by establishing a collaborative relationship with our local community college that specializes in construction and facility maintenance trades education. Our interaction with course directors at the community college has brought referrals of their best and brightest including several female trades technicians.

Once we successfully recruit a Facility Services Technician, we closely observe the employee's attendance, performance and level of cooperation during a six-month probationary period. After employment probation, the shop manager uses discretion in deciding when and if the employee should be entered into a fast-paced career ladder program. The program was initiated by our Human Resources Department to provide advancement opportunities for all university staff career paths, but it has been a particularly valuable tool for maintenance workforce managers. By setting career ladder development milestones that include skill course completions and state license exams, we ensure that rigorous competency standards are achieved. For the aggressive and upwardly mobile employee, a wage grade increase can be earned in as little as six months. Our Facilities Services Technician's first advancement is into a Level I trade specialty position, ex. Plumber I, Electrician I, or HVAC I. Newly licensed technicians are paired with more senior employees until they gain additional experience. Career ladder advancement to higher grades within each trades job family is also a management option. The career ladder development milestones for movement to a Level II or Master position include completion of more advanced course work and movement up the hierarchy of state and national competency exams. Minimum time in grade limitations also apply to employees seeking level II or Master positions.

Our new recruiting focus on the basic qualities of self-discipline, academic achievement and proven work ethic has been very effective. Our vacancy rate has been reduced and the shop work force has been rejuvenated by an influx of high achievers. And employees who owe their rapid career advancement to the university's Career Ladder program seem less likely to jump to higher paying but less stable employment situations outside the University. We still suffer from a shortage of personnel at the highest skill levels, but after five years of experience with career ladder management we are quickly approaching a staff development milestone – several personnel who began as modestly skilled recruits will enter top level Master Technician positions. For more thoughts on trades work force management, give me a call at 505-277-1798.

Arizona Report

Phoenix College
By Arnold Guerra

Craft's Skill Training

Phoenix College promotes continuous education and professional growth for it Crafts Staff. The staff is allowed to take classes, workshops and seminars in order to

maintain, and improve, their skills and knowledge of their trade. HVAC staff is required to stay proficient in the use and operation of the Johnson Controls Metasys systems. Thus they attend annual training at the Phoenix Johnson Control Institute. All Crafts Staff must stay current in OSHA and their trade standards. The College uses professional growth funds, which are budgeted each year, for the purpose of continuous education. To encourage the staff to improve their skills and knowledge, the College will pay the employee an additional 2.5% of their annual salary upon completion of one of the following:

2.8 Cumulative Education Units (CEU) or
1.4 Cumulative Education Units and 3 college credits or
Six (6) college credits.

CEU's issued by the training vendor must be approved by the International Association for Continuing Education and Training (IACET).

Phoenix College also participates in the Apprenticeship Program of the Maricopa Community College District. Phoenix College Crafts Staff are apprenticeship mentors for apprentice carpenter, air conditioning technicians and electricians.

The apprenticeship program is a recognized program under the Arizona Department of Economic Security Apprenticeship Services and the Bureau of Apprenticeship and Training, U.S. Department of Labor.

This program is open to District Custodians, Groundskeepers and clerical staff who wish to become Crafts employees.

The College and the District will be looking at staffing levels as a part of a District wide master plan, prior to a 2004 Bond Fund initiative. We will be using the APPA Maintenance Staffing Guidelines and local consultants for this study. A lot of the preventive maintenance of critical equipment is being outsourced due to in-house limited resource availability.

EPA Honors PCC with Environmental Award

In recognition of Pima Community College's efforts to protect and preserve the environment, the Environmental Protection Agency's Region 9 office selected PCC to receive one of its five 2003 Environmental Achievement Awards. Wayne Nastri, EPA regional administrator, said the award recipients applied creativity, teamwork and leadership in addressing many of Arizona's most pressing and complex environmental problems. "Thanks to their efforts, our air, water and land will be cleaner and safer for generations to come," he said. "The winners set an example for all of us to follow."

Pima College has an active environmental program that includes composting, compressed natural gas in fleet vehicles, energy and water conservation, waste reduction and recycling.

In November 2002, the College received a Leadership in Energy and Environmental Design (LEED) award from the U.S. Green Building Council for the Plaza Building constructed at Desert Vista Campus. This was the first building in Arizona to receive the LEED designation and one of only 23 in the nation. The Plaza Building will use 21 percent less energy than a standard building, paying back the College's investment in energy efficiency in 10 years.

The EPA said that the efforts above, combined with College practices of irrigating athletic fields with reclaimed water, shading parking lots and creating mercury-free campuses, show PCC is a model for demonstrating environment stewardship.

Judi Gard, environmental program coordinator, and Scott Harper, director of environmental health and safety, were honored guests at an award ceremony the EPA held on Earth Day, April 22, in San Francisco.

Pima Community College
by Mike Baker

Groundskeeping operations within a College environment can be a challenging and rewarding task. Our goal is to provide a safe, comfortable and visually pleasing landscape for students and staff to enjoy. The fact that we are located in the Sonoran Desert can really make it interesting. Determining the current and future water needs of our landscape is a big part of our job.

The flora of the Sonoran Desert is one of the most diverse in the world. And we try to use as many native and drought resistant plants in our landscape as possible. The Sonoran Desert is where rivers flow only after a rain. Wildflowers have names like brittlebush, sand verbena, prickly poppies, Spanish needle and devils claw. Cactus, trees and shrubs are named prickly pear, hedgehog,

soaptree yucca, bastard toadflax and crucifixion thorn. The better-known plants are Mesquites, Pola Verde and Cottonwood Trees, Saguaro and Cholla Cactus. Although some of these plants have funny names it is serous business to maintain them in a landscape.

Water is a dwindling commodity and effluent water is not always available, to top it off we only average about twelve inches of rain a year. This necessitates the use of a highly efficient irrigation system and schedule. We must be careful not to over water, not only for the health of the plant but because the water company will fine us. The majority of our landscape is irrigated year round, with minor modifications during the winter. This requires extensive supervision and maintenance, as well as periodic adjustments as the landscape matures.

There are three types of plants used in our landscapes low, medium and high water usage. Low usage plants are ground cover, some shrubs and cactus. Medium usage is shrubs and medium size trees. High usage is large trees and of course the turf. Low water use plants can be hardest to keep healthy and looking good. Some have a high transpiration rate for their size and stress easily. Others can get woody as they mature and become unattractive in the landscape. Medium water use plants can be the quickest to establish in new landscape. These plants require the least maintenance and tend to be the best looking and flowering in a desert landscape. High water use plants, although sometimes hard to get establish and not the best for a desert landscape, are often the most pleasing. They are the most time consuming of plants to maintain, but seem to be the favored plant of the college community. If you want some real trouble try to remove some turf or a large tree and see what happens.

All the challenges aside, being a groundskeeper can be one of the most rewarding of trades at a college. We are the front line usually seen first by parents and future students. A well-maintained landscape is something to be proud of and is appreciated by others. There is nothing better then the look of a well-pruned tree or the smell of freshly cut grass.

Editor's Corner

We have some new authors in this newsletter, which encourages me. The newsletter is ultimately your opportunity to tell the other members about the wonderful things you are doing to support your institution. The more everyone participates the better the news letter, so a big THANK YOU!! to all the new contributors.

APPA's annual election of officers took place this past April. The elected officers for 2003-2004 are:

President-Elect: Ed Rice, Kansas State University
Vice President, Professional Affairs: Alan Bigger, University of Notre Dame
Secretary – Treasurers: Bob Carter, Dalhousie University

The APPA By-laws were also amended in this election and, therefore, there are proposed RMA by-law changes in this newsletter. Your institutional representative will vote on these proposed changes at our annual meeting in Sedona, Arizona.

Pima Community College was honored by EPA Region 9 with the 2003 Environmental Award for Outstanding Achievement at Region 9's annual award ceremony this past April. Please join me in congratulating Pima's Environmental Health and Safety Department (part of their facilities unit) for a great job. Let me know if your unit receives any type of recognition and I will be glad to put the information in the newsletter.

Last, please remember that the newsletter is only as good as you make it. Contribute articles (just a couple of paragraphs) either to your state correspondent; Harvey Chace, University of New Mexico, New Mexico; David Cain, Northern Arizona University, Arizona; Brian Nielsen, University of Utah, Utah; John Bruning, University of Colorado, Colorado; Bob Lashaway, Montana State University, Montana; Frank Fox, University of Wyoming, Wyoming. As you can see we need a correspondent for our Canadian members, so feel free to volunteer. You can also send articles directly to me at Paul.Smith@pima.edu. Articles for the next newsletter are needed by August 6, 2003. Thanks for your support and have a safe summer.

Proposed By-Law Changes

Article III – MEMBERSHIP

2. (e) – Change to read, " . . . physical plant, buildings and grounds, or facilities department or . . . ,

2. (f) – Change to read, "The institution must have an individual on its staff who is responsible for its physical facilities."

3. – Change to read, "Each member institution is entitled to an . . . . One regular member must be the chief facilities officer of the member institution responsible for . . . . Each institution shall be entitled to one (1) vote regardless of the number of regular members . . . .

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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	**Steve Baldick**	University of Calgary
First Vice President	**David Brixen**	Arizona State University
Second Vice President	**Mark Shively**	University of Wyoming
Third Vice President	**Tommy Moss**	Colorado State University
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Newsletter Editor	**Paul Smith**	Pima Community College
Senior Representative	**Craig Bohn**	University of Utah
Junior Representative	**Paul Smith**	Pima Community College

FUTURE MEETINGS

2002 Annual Meeting	Banff, Alberta, Canada	University of Calgary
2003 Annual Meeting	Sedona, AZ	Arizona State University
2004 Annual Meeting	Jackson Lake Lodge, WY	University of Wyoming