Rocky Mountain Views
Rocky Mountain Association of Higher Education Facilities Officers
March 2008

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APPA Educational Opportunities

April 19-23, 2008
Leadership Academy
Scottsdale, Arizona

July 9-11, 2008
APPA 2008: Good to Great
San Antonio Convention Center
San Antonio, Texas

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Institute for Facilities Management
Renaissance Austin Hotel
Austin, Texas

September 7-11, 2008
Supervisor's Toolkit
Renaissance Austin Hotel
Austin, Texas

September 29-October 1, 2008
RMA Conference 2008
The Canyons Resort
Park City, Utah

January 18-22, 2009
Institute for Facilities Management
Marriott Waterside Hotel
Tampa, FL

January 18-22, 2009
Supervisor's Toolkit
Marriott Waterside Hotel
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For a complete listing of training and educational opportunities, please go to APPA's web site (www.appa.org).

President's Message

WELCOME IDAHO!!!! After several years and the efforts of many, including our friends in PCAPPA, I am happy to report that Idaho is now officially part of RMA. RMA welcomes Idaho with open arms and although they have not been a stranger to RMA it is nice to finally complete our map and make the transfer official. The APPA board of directors voted during their mid year board meeting in January to make this transfer. I had the honor of being present for the discussion and ultimate voting results. What was most impressive was the support of our friends in PCAPPA and also the other regions. This of course reinforces to me the great organization that APPA is and the camaraderie amongst our regions. So let me say it again…
WELCOME IDAHO!

This time of year we are all probably struggling with budget planning and many of us are preparing for a new fiscal year. I think it is appropriate at this time to also think about RMA and how if can best support our members as we face the challenges ahead on our respective campuses.

Each spring the RMA board meets to discuss many things. This year will be no exception, as we discuss issues that were learned at APPA's mid year board meeting and issues respective to RMA. Also, if you have any items that you would like to board to consider, please do not hesitate to contact me so that I may include them on the meeting agenda. We now have committees with committee chairs with full voting rights on the board. I encourage you to learn about the various committees and contact the respective chairs to volunteer your services.

RMA is over 50 years old and it is always good to reflect on where we have been as we try to position ourselves for the future. Being a member of RMA is not just about paying dues and attending the fall conference. RMA can be a resource to all of us. I urge you to get involved with a committee, to submit articles for the newsletter, and even to pursue a position as an officer. Make a difference and go for it!

APPA Report

Correspondent: Jill Amstutz

Register for April Educational Programs
APPA is offering the Leadership Academy and Supervisor's Toolkit April 19-23 in Scottsdale, AZ. The Leadership Academy is designed in four tracks, each emphasizing a different perspective and type of leadership skill on an individual, interpersonal, managerial and organization level. **The first two tracks of the Academy are currently full!** The Supervisor's Toolkit is an open-ended and pragmatic approach to help supervisors realize their personal and professional growth. For more information and to register visit: www.appa.org/training.

Get Your EFP
The next EFP credentialing prep class will be April 18 in Scottsdale, AZ. You can take the exam April 18 or 19. The Educational Facilities Professional (EFP) credential will validate your knowledge and competence and show decision-makers that you are an accomplished professional. The EFP program also confirms your achievements and illustrates your basic, fundamental understanding of what it takes to create and maintain safe, functional, and inspiring learning environments, now and for future generations. For more information contact Suzanne Healy.

Register Today for APPA 2008:The Rise to Greatness
Scheduled for July 9-11 in San Antonio, this is the premier event for educational facilities professionals.
Nowhere else can you:

See internationally renowned speakers Dr. John Maxwell, Marcus Buckingham, James Kouzes, Don Tapscott, and Stephen M.R. Covey

Choose from 30 panel and break-out sessions featuring the leading experts and best practices.
Network with hundreds of your peers from the United States, Canada, and around the world.
Experience the latest products and services in the APPA 2008 Hall of Resources.

All in one place for one low price. For more information and to register visit: www.appa.org/training/appa2008

New APPA Publications Coming in March
Sustainability and environmental standards are hot topics for educational campuses and facilities around the world. APPA is publishing two comprehensive resources covering the latest trends, issues, and solutions on these topics.

The Green Campus-Meeting the Challenge of Environmental Sustainability: This anthology of articles from Facilities Manager explores the meaning of genuine environmental sustainability -in global and local terms- while profiling many excellent campus environmental programs. It also includes new essays from top campus environmental leaders and advocates addressing many opportunities for campus greening.

Environmental Compliance Assistance Guide (2nd Edition): This update is a comprehensive guide to assist facilities and campus safety professionals in meeting current environmental regulatory requirements. The guide provides elements of an effective program for environmental management and compliance, a regulatory and campus programs matrix, and legislative/regulatory program summaries.

New myAPPA Feature - Create Your Own User ID
Having a hard time remembering your APPA User ID number? Now, you may create your own unique and memorable user ID. To change your ID, log in to myAPPA using your system-generated user number. Go to the purple myAccount box. Click on "Change your User ID," and create your own ID that is at least six characters long, including one number. It's that easy.

APPA Elections
Institutional and Affiliate Primary Representatives vote now for your President-Elect, Vice President for Professional Development, and vice President for Information & Research. Elections close April 24, 5 pm ET.

Facilities Performance Indicator Report Available
The Facilities Performance Indicator Report (FPI) is now available for purchase. Features include participant summary reports, dashboards, and detailed reports. Order now at appa.org/research.

RMAPPA Business

Join the 14ers Club!
Would you like to become involved in promoting the development of the next generation of facilities managers? Our region has created the "Fourteeners Club" (aka 14ers Club) for that exact purpose. The 14ers Club is a newly established group of our most dedicated members that are willing to serve as a mentor for the professional development of our future leaders.

Article VI of our By-Laws was adopted last year and outlines the criteria for membership. We would be honored if you would take a moment to consider membership in this elite group with a noble cause. Applications are available on our web site http://www.rmappa.org and should be submitted to ebarfield@msubillings.edu. Feel free to contact any RMA officer if you have any questions.

Registration Now Open for 2008 Educational Forum
Join us in the fall of 2008 in Park City, Utah for the annual RMA Educational Forum. This meeting will be hosted by Weber State University and is situated near the Utah Olympic Park.

Online registration is now open. You can use the conference web site (www.weber.edu/facilities/presentation.html) or link to www.weber.edu/fm and select the conference link.

Please let others who might be interested in attending this conference know of the website registration and how to access it. We look forward to a fun and educational conference.

Newsletter State Correspondents
Mr. George Stumpf has agreed to serve as Colorado's correspondent for a period of two years. George replaces Al Mages who retired last year.

Correspondents are still needed for the states of Wyoming and the Idaho. Anna Weskerna has done an excellent job as interim correspondent for Idaho and we hope that now that Idaho has officially been joined to RMA she will agree to continue her excellent services. We've not seen a Wyoming report for some time and hope that the identification of a correspondent will encourage contributions from that state.

The time commitment for these positions is minimal and the primary task is to elicit and collect material for the RMA newsletter and web site.

Arizona Report

Correspondent: Dave Brixen

University of Arizona

Office of the Director, Facilities Management

Turbine Efficiency with Ice Storage

With a student population of over 37,000 and supporting approximately 216 buildings on a 378 acre campus, the University facility infrastructure consists of three central plants: the Central Heating Refrigeration Plant, (CHRP) the Central Refrigeration Building (CRB) and the Arizona Health Sciences Center (AHSC). These plants are hydraulically connected with all distribution and production controlled and optimized by a Trane Tracer® Summit building automation system. This means that chilled water produced in any of the plants can be delivered to any corner of the campus.

The CHRP was built in 1950 and has 8,500 tons of centrifugal refrigeration chilled water capacity along with 154,000 pph of 125 psi steam capacity from three gas-fired boilers. It also has a 6.5 MW, gas-fired turbine generator with an auxiliary 1.7 MW steam turbine generator that produces electricity for the campus grid along with 33,000 pph of 125 psi steam from the Turbine Exhaust Heat Recovery Steam Generator (HRSG.)

The second central plant, built in 1968, is the AHSC. It has 7,200 tons of centrifugal refrigeration chilled water capacity along with 70,000 pph of high-pressure steam capacity, which is produced by two gas-fired boilers and 24,000 pph high-pressure steam from a 4.5 MW gas turbine at HRSG.

The CRB, is of 1988 vintage and is the home of the Ice Storage System. When its three ice chillers make ice, the system has 15,650 tons of centrifugal refrigeration chilled water capacity. However, when the chillers produce chilled water, that capacity is increased to 17,000 tons.

How Ice Storage Works

The working principle of an ice storage system calls for chillers to make ice inside storage tanks during off-peak, nighttime hours when the energy is produced more efficiently, economically and environmentally. Ice Storage uses the stored "thermal" energy of the ice to cool the buildings during the daytime peak-usage periods. This effectively shifts the electrical load off-peak while avoiding higher-price energy and demand charges that are imposed by many utilities.

The operation of an Ice Storage System is comprised of two normal modes: the ice charging mode and ice melt/burn mode.

During the ice charging mode, a designated ice-making chiller produces low temperature, 25% glycol solution that freezes the water inside an ice storage tank. This closed glycol loop consists of the ice storage cooling tanks, heat exchangers and glycol pumps. The ice charging mode continues until full ice capacity has been reached (usually about 8 to 10 hours).

Initiated via an automated process, the ice melt mode begins when the temperature differential increases between the chilled water supply and the chilled water return. During the Ice Melt Mode, the chillers are either turned off or used to supplement the cooling requirements of the system.

The Benefits of Ice Storage Cooling

In many cases, ice storage allows for reducing the size of installed refrigeration capacity. For example, if the installed cost of the chiller is $600/ton, every avoided ton of refrigeration capacity related to the installed ice storage system capacity saves $600. This assumes that the installation already has supporting chiller equipment in place, such as cooling towers and pumps. For a new installation, this amount can exceed $1,500/ton, in which case the chiller plant size reduction can often completely offset the cost of storage.

The University of Arizona's decision to use ice storage involved many factors including economic and environmental. While ice storage is generally touted as a cost-saving cooling option, in this instance, ice storage also provided the unique ability to dramatically increase cooling capacity while improving the overall efficiency of the plant. To the University, these concerns were of paramount importance.

Ice storage also provides the University with greater flexibility in chiller and turbine maintenance scheduling, yet another benefit of base loading the turbine generation.

Ice Storage contributes to N+1 redundancy as well, an intrinsic concern for any engineer. While the University has sufficient capacity in place to meet its current daytime, peak-cooling load, ice storage serves in a standby capacity. Furthermore, should any chiller become inoperative, another chiller can be called into action without disruption to the service.

Computer Modeled

"The efficient integration of all these loads could be a logistical nightmare, explains Marianne Deutsch. "That's why we recently installed highly sophisticated software to help optimize our energy consumption." This software enables plant operators to monitor, control and evaluate energy flows and costs.

The software creates up to 48 possible operating scenarios with different mixes of plants, chiller, boilers, pumps, towers and ice storage. Operators can then choose the optimal scenario on the basis of cost, maintenance schedules, campus building schedules and the weather forecast. "Ice storage has given us the flexibility we needed to maximize our efficiency with the production and use of energy," Deutsch added.

Saving energy, reducing costs and lowering polluting emissions are an integral part of the University of Arizona's mission of providing a comfortable, affordable learning experience for its students. University's facility managers are charged with maximizing the utilization of available resources and are committed to co-generation. Faced with having to provide heat to the hospital, they were also faced with having to co-generate that heat. Ice storage met that requirement by consuming the co-generated electricity, leveling the load and improving efficiency and lowering emissions.

The Ice Plant

"The ice storage system (also known as the thermal storage project or ice plant) is powered by a Combined Heat and Power (CHP) system located at the AHSC plant, that supplies electricity to three Trane CenTraVac ice chillers," says Ned Morris Trane's local representative. "These chillers make ice at 910 tons and 0.783 kilowatt/ton. They freeze water in the 156 storage tanks which are discharged on demand, providing 23,400-ton hours of capacity or 3,120 tons for 7.5 hours. We often accelerate the discharge to as high as 3,500 tons during peak hours, further reducing electric demand charges."

The use of ice storage for recovering turbine heat means the AHSC Plant Turbine is now loaded during off-peak hours, thereby reducing the higher natural gas cost for boiler steam. In turn, chilled water costs are kept to a minimum by reducing the number of chillers that need to run at peak-demand periods.

When fully loaded, the Deltak Heat Recovery Steam Generator (22 KPlbs/hr) produces 24,000 pph of high-pressure steam, most of which is used by the AHSC as well as by the University Medical Center and its surrounding buildings. The auxiliary steam turbine can be used to generate electricity during periods of excess steam production, if the chilled water load allows.

Chillers

The ability to choose gas or purchased electricity, combined with the ability to move or reduce electric demand with ice storage, provides tremendous negotiating power with the local utility suppliers.

Ice is produced at the CRB during the evening and at night and is melted to produce chilled water during the day. However, during winter evenings, when the campus chilled water load falls below 5,000 tons, to the resultant electric load on the AHSC 4.5-MW Solar turbine is unable to meet the University Medical Center and Sciences Center buildings' steam demand. In these situations, The ice chillers are brought on line to produce ice, raising the electrical load on the turbine and thus producing the needed steam.

With ten years of steady investment in chilled water distribution infrastructure, the University has created a chilled water grid with less than a 12 psig pressure differential across the 1.3 mile campus diameter. As a result, chilled water produced by the ice storage system can be distributed across campus during the day to displace production by any chiller connected to the utility's electrical grid and distribution loop. "Shaving this peak represents up to a $38,000 monthly savings to the University," notes Marianne Deutsch.

In addition, prior to ice storage, the chillers needed to "cycle" in order to meet fluctuating cooling loads. With ice storage, the chillers can run constantly at the same level of output, which, in turn, optimizes the turbine's efficiency and extends the life of the chillers.

UA representatives investigated ice storage by visiting several installations that use this technology, including CALMAC's installation at Shell Point, a retirement community in Ft. Meyers, Florida. "Eventually the CALMAC system was chosen because of its tanks' non-corrosive material, the ability to isolate modules in groups of 3 (IceBank® tank model 1500C), the mobility of the tanks, their ease of installation and the ease of maintenance and repair." notes Gordon Bush, the U A Project Manager and Chilled Water Staff Technician, "An additional consideration was the simplicity and modular nature of the CALMAC system. We started on June 1, 2004 and produced our first batch of ice on July 1, 2005. We have had ice available everyday, without exception since then. We would not have made this tight schedule without our piping partner, Sun Mechanical headed by Scott Candrian."

The original plans called for 23,400 ton-hours (3,000 tons for 8 hours at 39 degrees), however up to 23,400 ton-hours from the system at a higher discharge temperature for longer melting periods was delivered. Today the system relies on 156 tanks at about 150 tons/hour each.

The original system has worked so well, we have a new project under construction and have ordered another 49 tanks and a 1250-ton Trane chiller, for an increase of 7,350 ton-hours of ice storage at the CHRP. The 1250 ton chiller can be used for both ice or chilled water generation.

Colorado Report

Correspondent: George Stumpf

University of Colorado at Boulder

By John P. Morris, Director, Physical Plant

Campus life is booming at the University of Colorado at Boulder. The Chancellor has initiated the Flagship 2030 Strategic Plan, which will serve as a framework for CU-Boulder to meet its objective of becoming the "new flagship university" for the 21st century. The plan will position the university for global leadership in education, research, and creative work by the year 2030.

What impacts could this have on Facilities Management? The plan discusses an increased student body; additional faculty; leading edge research; more on-campus student

residency; potential on-campus faculty housing, academic villages or mixed use development; open space; amenities in and around campus; gateways and identity; alternative modes of transportation; sustainability; and a trimester concept. Clearly, Facilities Management will have to gear up for renewed campus planning, and creative solutions will need to be developed in close collaboration with the campus and surrounding communities in order to handle the proposed changes.

To add to the challenge is the campus goal of "Carbon Neutrality". Adding significant building space while simultaneously controlling the carbon footprint will require some innovative thinking in building construction and renewable energy supply. Operating the campus under a trimester concept increases building utilization but creates a challenge for day to day operations. This could potentially increase deferred maintenance costs, and it closes the traditional summer window for construction and renovation.

2030 seems like a long way out, but, as many of you know, 20 years can go by in a flash. In the mean time, the campus has nearly $800 million on the current five year capital improvement plan, including projects such as existing building renovations; a new Visual Arts complex; a new heating/cooling plant with associated distribution system improvements; a new Biotechnology building; a new Geosciences building; additions to the Physics building and Aerospace buildings; a new dining facility and parking garage; a Performing Arts Center; a new Athletics practice facility; new faculty offices; new residence halls; and a new under/over pass for vehicular and pedestrian crossing.

It is an exciting time to be in Facilities at the CU-Boulder campus!

Idaho Report

Correspondent: Anna Weskerna

Idaho State University

By Anna Weskerna, Management Assistant

Darrell Buffaloe, Associate Vice President for Facilities Services at Idaho State University, has announced his retirement effective June 30, 2008. He has worked at ISU for 26 years starting as the Motor Pool Superintendent in 1982.

Darrell has been part of APPA and PCAPPA for most of his career where he served on the membership and education committees, as well as serving as the PCAPPA president. Although he gained experience and valuable connections in PCAPPA, he always felt the Idaho schools had more in common with institutions in the RMA region. As a result, he worked with APPA, PCAPPA and RMA to allow Idaho to become a permanent member of RMA.

For the past ten years Darrell has served as an adjunct faculty member of the Human Resources Training and Development Department in the College of Technology. He instructed courses that are required for Professional - Technical Education instructors and for academic students working on a bachelors or masters degree offered in that program. Instruction has been his hobby and he has refused to accept pay for this service.

As a result of the enjoyment he gets from working with aspiring Professional - Technical Education professionals, he has had a long term goal of working with local community colleges in an instructional role after his retirement. As luck seems to follow him, he was offered a chance to become department chairman of the Trade and Industrial Educational Department of the College of Southern Idaho in Twin Falls at the time of his retirement. As a result, he will retire from Idaho State University on June 30 and accept the department chairmanship on July 1.

We wish him the best of luck in his "retirement."

University of Idaho

By Mark Labolle, Director, Building Trades

"Safety Awareness Pays" is the name of the new safety incentive program introduced by our Facilities Safety Committee (FSC) in February of 07. The basic idea is to reward our employees for identifying and correcting, or reporting potential safety hazards they encounter while working. The FSC first looked at a reward system that is based on hours worked without a reportable or lost time accident. We examined a couple of commercially available incentive programs and found that they seemed to penalize employees when they had injuries, rather than reward them for practicing safe behavior. After much discussion, we concluded that a program based on these negative parameters could lead to staff concealing injuries or resented by staff, and counterproductive to its intent, which is to encourage staff to be proactive about their personal safety and the safety of others.

Safety hazards are entered on forms available on the web, from unit supervisors, and FSC members. Each month, the FSC reviews all entries from the past month to determine validity. All valid entries are rewarded with what we call a Level 1 Reward, such as a coffee mug, flashlight, etc. Then the committee votes on the month's entries to determine the most significant or outstanding entry, and the winner receives a Level 2 Reward, which are a little nicer, such as a fleece blanket or stainless vacuum bottle. In addition, every six months, all entries are eligible by random drawing for a grand prize $50.00 gift card. The financial obligation of this program is minimal; coupled with an actively engaged safety committee, the program has been very successful.

To date, our accidents reported that result in worker's comp claims have decreased by 46%, from 35 in calendar year 2006 to 19 in 2007; there has been a 72% decrease in the total cost of claims reported, from $141,000 in 2006 to $38,000 in 2007. While it is unlikely our incentives program is responsible for every

bit of this dramatic downturn in injuries, we believe it is major contributing factor.

Montana Report

Correspondent: Jonathan Ford

Montana State University at Bozeman

By Jonathan Ford, Manager, Environmental Services

The suggested topic for this quarter's RMAPPA newsletter (Dealing with Harsh Economic Times) is likely to produce quite a variety of approaches characterized by budgeting practices so specific to each organization that it will be difficult to determine what the different responses really mean. This article will probably be no different. It will be hard to decipher for some of the readership despite my best efforts to use common terminology, so to those I offer my preemptive apologies. However, my suspicion is that all our member institutions follow a somewhat similar hierarchy of measures when confronted with budget cuts.

First, lets place the discussion in context by dealing with the relativity of the phrase, "harsh economic times". For most of the thirty-one years I have worked at Montana State University (having legally immigrated from California in 1975), it would have been appropriate to simply tack a "Welcome to" in front of the phrase above and placed signs at all the border crossings. Twenty years ago, in a national economic analysis, only Puerto Rico stood between Montana and dead last in terms of economic climate in the list of the states and territories of the United States.

The differences between Montana and more normalized regions across the country were brought home to me in a facilities job interview I had with a large university in the Rocky Mountain Region in 1988. I was talking with the search committee and trying to sell myself by highlighting what money-saving techniques I had learned from working in a really lean organization. My unspoken premise was based on the assumption that any organization would naturally aspire to utilize completely (and occasionally overextend) the financial resources available to it to produce the maximum beneficial result possible. From the perspective of any facilities organization engaged in effectively expending those resources, it would universally seem that there was not enough money. As my theory went, the scale of an operation had nothing to do with the internal perception of availability of resources; rather, all organizations performing their functions properly would be crying the blues of being short-budgeted no matter how large they were.

I studied the little-to-no reaction I was getting from the search committee as I ranted about my "facilities-maintenance-on-a-shoestring" experience and what a good thing that was because it could lead to money-saving ideas. I finally could not wait any longer to find out what they were thinking, so I blurted, "You guys want to use your money wisely, right? You probably feel that you don't have enough money to do all the things you want to do, and by getting cost-efficient in various areas, you could free up enough money to do some of those things you are unable to do right now." The answer came from one member of the committee in a low voice, almost a snarl, and with his face in a kind of a scowl, "We have plenty of money." There was not a sound from anyone else, and it brought me up short.

To this day, I have no idea what I tapped into there, but it has given me plenty of hours of idle contemplation, wondering what wound I had poked inadvertently. After speculating about all the inter-personal issues that might have been present, the personalities involved, the possible unusual budgeting experiences and scenarios that might have been brought to bear, I did come to some conclusions.

I no longer naively think that the impact of budget cuts are proportional as one scales through small to large organizations, neither in how they are perceived by the participants or in how the cuts impact the maintenance of the facilities. In a large operation, a large cutback might mean three capital projects instead of six; for a small operation, it might mean the ability to stock the rest rooms with paper and soap or not. One is big-time politics, the other up close and personal. Which has the biggest impact?

If an organization has lots of funds but is unable to obtain the staffing to properly dispose of those funds within a fiscal year, why yes, it is possible to have "enough" or "too much" money. It can be a big problem to get the money spent under those circumstances.

Therefore, how an organization responds to budget shortfalls depends on lots of variables. How large is the operation? How large is the cut in proportion to the overall budget? Is the cut likely to be permanent or temporary? Is the damage produced by the cut intended to be visible or invisible? Is the nature of the cut dictated to the facilities maintenance group by the state or central administration, or is it allowed to be discretionary?

There is a big difference between the two approaches in that last question. When budget rescissions happen, we at MSU have the fortune to be asked what the effects of, for example, a 10% cut would be. We answer by identifying what services would no longer be provided as a result of the cut. A cut dictated by the State or central administration would have entirely different ramifications and quite possibly would be much more uncomfortable for everybody involved.

MSU University Services approaches the problem of budget cuts with a transparent process based on senior management team analysis and decision-making. A loose hierarchy of budgetary elements that might be sacrificed in the event of a cut is established with items producing the least program damage offered first. Which budgetary line items rise to the top of the sacrificial list depends on the size and nature of the cut, as mentioned above.

Capital Projects. Capital projects, while attractive targets, are often subject to political forces beyond our control. A new facility is often politically attractive for a legislator to support and can get momentum going through

the political process. The greatest expense for such a project over its lifetime, the operations and maintenance costs, are almost always underestimated and sometimes entirely unaccounted for in the political heat. A new building added to the roster without maintenance funding is, in essence, the same as a budget cut. For the last twenty years, we at MSU have been relatively successful in refusing a facility if the O&M is not funded, but that is not always the case at other institutions. If a facility is carried for several years through the political system and its momentum propels it forward at the beginning of a period of budgetary retrenching, the financial effects are compounded. However, what usually happens is after-the fact: the O&M is initially funded, then the overall budget is subsequently cut for unrelated reasons indirectly affecting the O&M funding to some degree.

Major/Deferred Maintenance. The area most likely to be tapped in a budget cut is in the area of major or deferred maintenance. Projects of this type can be put off for years before the repercussions show themselves, and the hope is always that those consequences can be addressed in a different budgetary and/or political climate. The problem with this approach is that while it is particularly painless in the short term, it can easily spiral out of control as the years pass and the cumulative effects compound. Most of the nation's institutions and their resident state governments are really just beginning to realize the size and scope of this maintenance liability at their campuses.

Extended Equipment Replacement Cycles. Another potential sacrificial budgetary area with low visibility is to extend the equipment replacement cycles. This is similar to deferred maintenance, although the deleterious effects are even quicker to show up because of the shorter cycle length. We are scheduled to spend $250-300 thousand per year to keep up with necessary equipment replacement. Obviously, a backlog in this area can quickly get very expensive with escalating repair costs and downtime.

Extended Tree Maintenance Cycles. Yet another place to save a little money is to put off maintenance-pruning of trees. This can ultimately shorten the average life of the trees, or possible endanger people from undetected falling branches that, because of lack of pruning, were susceptible to breakage during wind or heavy early or late snowfalls.

Value-added Enhancements. After those areas where the effects of budget cuts can be hidden for a few years are tapped, we generally focus on what might be considered value-added enhancements that will not hurt anything if they were dropped. One example is the 20 thousand annual flowers we propagate and plant out in campus flowerbeds every year. Another would be the handling of recyclables. A third would be aerating, fertilizing and spraying the turf for weeds.

Reductions in Service/Workforce. We try to save until last the budget areas that, were they to be cut, would impact the campus community in a personal way. This would involve lay-offs, reductions in the kinds of tasks and frequency of custodial service, longer service delays and backlogged work requests from the crafts, and less responsive snow removal.

Sometimes these types of reductions can be long-lasting. MSU's Custodial Services is still under the influence of a series of cutbacks in 1987 and 1992 (21% RIF) that left the research labs without service unless they reimbursed the State budgets for the service, personal office trash removal to once per week and office suites with service only twice per week. Since 1992, the only FTE gains we have made are those that came with O&M funding for new buildings geared to the proper staffing levels.

These types of decisions often have to be made against the backdrop of a dysfunctional funding model that does not take into account inflation: rising wages, increasing expectations, unfunded mandates, increasing infrastructure without funding support, statutory requirements, increasing safety requirements, increased training requirements, higher employee turnover, etc. In MSU's case, without any adjustments for inflation at the current rate, our entire Major Maintenance fund could be wiped out in as little as ten years.

Having been through this process several times in my tenure here, and facing the potential for another round of cutbacks, writing this article brought up a number of somewhat depressing memories. Looking at the bright side, for those of us who did not get laid off, we lived right through it and went about our business as best we could. All that is really necessary is to patiently adapt to the new budgetary paradigm, and stoically answer those calls and explain--again. And that is all that anyone can do...

New Mexico Report

Correspondent: Harvey Chace

University of New Mexico

Harvey's Heroes

By Harvey Chace, Associate Director, Physical Plant

It seems that every generation develops its own set of heroes. When I was growing up our heroes were cowboys: Gene Autry and Roy Rogers and then Marshal Dillon and The Rifleman. They were soon replaced by the Red Sox outfielder, Carl Yastremski. When I got older my list grew to include uncles and cousins who became soldiers and policemen. Today our societal elite are rock stars, action movie heroes and the latest crop of star quarterbacks. And the Iraq war vets have found their way onto everyone's Hero Short List.

We give these individuals a special place on our personal inventory of people and things that matter. We do so because they represent levels of achievement or performance that is unprecedented. From the fan's perspective what they do is extraordinary! Heroes take our spirits with them, across the goal line and into the limelight. Ever been in the stands when your team wins a close play off game? Remember the rush?

This past weekend I attended a surprise play off event. It was a cross between a water polo championship and "Dancing with the Stars." The water feature was provided by a ruptured heat exchanger coil in the Basic Medical Science Building. The drenched electrical transformer in the basement shorted out and provided the star burst that dazzled the crowd.

The traditional heroes responded to the emergency. Three layers of supervisors and several product reps came off the bench and out of the dugout (and away from back-to-back heart-in-your-throat NFL Playoff games) to help the UNM home team prevail.

There was a lot on-the-line in this contest. Three of the Health Sciences' major research buildings were out of power and dozens of sensitive lab experiments hung in the balance. This was a must-win game.

By half-time, the heroes of past campaigns had exhausted body and spirit. They went to the locker room knowing that our star quarterback, the play-making "Transformer," was seriously injured and definitely out for the rest of the season.

Desperate coaches scribbled out a second half game plan. We would simply have to hold the line for a few days until a rental generator the size of a trailer truck could be recruited and rolled into place. Portions of the building, including sensitive animal research labs, would remain cold and dark.

The fans could feel the tension. It was Yogi Berra's "déjà vu all over again." The Red Sox and the Yankees, the Cowboys and the Giants "the big game on the line and it looks like" choke-time!

The dispirited heroes of past facility disasters drifted back to their cars and headed home to catch the final minutes of the day's other important contests. In the basement of the Medical Sciences Building, the UNM technicians went back to the contest minus their coaches and traditional play makers.

Two of Physical Plant's line electricians who could not and would not accept defeat stared at the open electrical panel and began a "what-if" review of the tough spot they were in. To the fan who was watching from the sidelines, they resembled two great military leaders in the middle of an epic battle, weighing new strategies and the odds of success. When I looked past them at the open electrical panel, the maze of cables and connections reminded me of the time I took the back off my home computer and then sheepishly put it back on before I hurt myself.

Then came the high voltage version of the Hail Mary pass; the discovery that the experts and traditional heroes had overlooked. Their solution required the movement of four cables from one connection point to another inside the electrical cabinet. They double checked their assumptions, got the shop manager's okay, and the game was on.

The first hurdle was the realization that they would have to kill all the power in the basement, including the lights, to safely make their wiring modification. It meant finding the correct cables inside the wall-mounted electrical snake pit and reattaching them to new posts in the dark! For those who have never tried to bend a 500 MCM electrical cable into a new direction and shape, it is like making balloon animals out of car bumpers. When you confine that activity to a 4' by 6' wall cabinet, picture a high school freshman linebacker trying to drag down a NFL running back inside a locked broom closet.

The lights went out and the third-and-long-play commenced. To my utter amazement, I saw a 6'3, 240 pound electrician morph into the shape of a high voltage electrical cabinet and begin the 30 minute, no-holes-barred, cage fight with a flashlight in his mouth. When the play was over and the circuit breaker was reset, lights, exhaust fans, and environmental lab chambers in the 80,000 square foot building sprang back to life.

So my hero list just got a little longer. It now includes the corps of PPD techs who can't stand the thought of defeat and usually won't accept the expert opinion that, "There is nothing you can do." Like so many unsung heroes, this team does its work in the shadows (or basements), never seeking recognition. Their only reward is knowing, for at least one more day, the lights are on at UNM.

Utah Report

Correspondent: Brian Nielson

Salt Lake Community College

By Bob Askerlund, Director of Facilities

With the Utah Legislative Session winding down, we're all in suspense as we await what might come as a result of the current session. Revenue estimates, in Utah, have dropped drastically in the past quarter and as the session closes, things that looked as if they would be adequately funded early on are being pared down.

State employee compensation increases were initially requested at 5% and looked like a given until recently. We understand increases have been pulled back to the 3% range currently. We still struggle to attract qualified applicants to our positions due to salary competitiveness issues. We frequently offer positions to qualified applicants to be told that they "can't work for that low of a salary".

A recent item of concern is that of State officials objecting to the O&M funding formula that has been used by Utah Higher Education for the past several years. They have indicated they think we are spending too much money for these purposes. It's ironic that when the funding formula was approved, SLCC took a decrease in the amounts we were being given per square foot, so as to better "align"

with other institutions… ouch!! Hopefully we can get back on track with this issue shortly.

For the past few years, SLCC has been closed on Friday and Saturday during Summer Semester. We have been able to save quite a bit of energy money during these shortened work weeks. This Summer Term we will go back to being open on Friday and Saturday. Costs for power, waste, water, extra custodial costs, etc. for all of our campuses will be greater this year as a result of being open these additional days throughout the summer. It will be interesting to see how our cost totals shake out during this time.

Current expense is still being funded at 20-year-old levels in Utah. The last increase we have record of occurred in 1989. As costs have increased for all of our supplies, and equipment, we've had to be creative to keep our overall budgets in line. As you're all aware, current expense item costs continue spiraling upward. We continue to see higher parts, fuel, plastic, chemical, and paper costs. Basic restroom supplies continue to escalate unpredictably.

We, at SLCC, are determined to be more efficient and effective in using the resources we have been given. We get creative and frequently examine how we are doing things operationally to align with our budgets. Fortunately, we have a wonderful staff that is committed to doing things correctly, even if that means taking a different approach in reaching our desired goals.

Utah State University

By Darrel Hart, Associate VP of Facilities

How does a facilities management organization cope with a period of budget cuts and difficult financial times in higher education? This is a fairly large question and one that probably has many answers. For state funded institutions, this is more difficult because state governments tend to think that across the board budget reductions are the answer to every situation. Of course this means that if you are a state institution you have the dilemma of improving and making the organization more efficient or waiting for the state to have a budget reduction and do your job for you. At Utah State University our Facilities organization chose the high road, making our functions more efficient without waiting for the state to prod us into action. This did make the downsize times more difficult as we had already reduced overhead, had pushed decision making down into the organization, and moved individuals who were not performing. Over the last six or seven years we have lost fifty-five positions through budget reductions. This has been very painful. However, there are still some long term things that we were able to do that have helped the organization.

We have a general philosophy that each person in the organization should be performing to their potential which is judged by their performance and everyone is here because they want to be. As soon as we knew we had a problem, our senior management sat down and identified those individuals who were not living up to their potential. We met with those people and put an improvement plan together with milestones that identified behavior changes or improvements that we wanted them to make. Each of those plans was closely monitored to determine whether or not the improvements suggested were on track. Some individuals made real progress and were able to sustain this over time. If progress wasn't made, we began the painful progressive discipline process. When it became clear that the organization was serious, many of these individuals decided to leave on their own. Because of the numbers, we lost a few people in most areas but the largest amount was in custodial. We had to reduce service due to these reductions and, for a time, our customer service areas suffered. But after hiring some really good part time help, we have been able to rebuild our service. Today our customers are probably happier than they've ever been. Our staff is more dedicated to quality service; they have seen that the standard has been raised and are responding to that improvement. Those employees who are here today have tremendous attitudes and are focused on improvement and quality service.

Because the administration knows that we are bare bones and doing an efficient job with the resources we have, I'm sure that we won't have to go through this again. At the time, I was very concerned about our ability to get the job done with fewer resources. But I believe that having these challenges has made this organization stronger than ever before.

Webber State University

By Kevin Hansen, Assistant VP, Facilities Management

It is not too soon to start planning for RMA 2008, the annual Educational Forum. The event will be held at The Canyons resort in Park City, Utah from Sunday, September 28th through Wednesday, Oct 1, 2008. Accommodations can already be booked at The Canyons resort by calling 1-435-615-8040 and ask for the special rate for RMA 2008. There is a wide variety of room accommodations available, to meet any lifestyle or budget, with a price range from $89 to $239 per night. The planning committee is busily engaged in getting all of the detailed planning completed to make this a spectacular event. Every college and university in Utah that is a member of RMA is assisting in some way to make this Forum one of value and interest.

Some of the events that are already planned include a visit to the Utah Olympic Park, site of the 2002 Winter Olympics and the opportunity to take a bobsled ride down the Olympic course. A progressive dinner at the Olympic museum, followed by a terrific aerial show by gifted skiers, many of whom are Olympic athletes or in training for the Olympics, is also planned for one or our evening events.

For those less adventurous, there is the opportunity to explore the Wasatch Mountains via a steam locomotive driven train or golf on a world class mountain course. For companions while the RMA members are attending seminars, there will be shopping and museum tours in both Park City and Salt Lake City, as well as a great excursion to Thanksgiving Point, a unique destination just south of Salt Lake City.

The seminars for RMA 2008 attendees are still being developed around the theme of "Achieving Excellence". We have already firmed up presentations on landscape management, performance analysis, and what we can learn from Mickey Mouse. A great presentation on becoming "The Best You" is also on the agenda. The proposed keynote speaker has not yet been able to commit to the Forum, but should be firmed up early in the new year. All in all, the educational value is being developed to provide each attendee a rewarding experience that will encourage a new level of excellence at every institution in the RMA area. Come and join the fun!

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Rocky Mountain Views
Rocky Mountain Association of Higher Education Facilities Officers

Newsletter of the Rocky Mountain Education Facilities Higher Education Facilities Officers (RMA)

The ROCKY MOUNTAIN ASSOCIATION OF PHYSICAL PLANT ADMINSTRATORS 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, Idaho, Montana, New Mexico, Utah, Wyoming and in Canada the Provinces of Alberta and Saskatchewan and the Northwest Territories.

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FUTURE MEETINGS

2008 Annual Meeting	Park City, UT	Webber State University
2009 Annual Meeting	Tucson, AZ	University of Arizona