



Winter 2006

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PSMJ's Public Works Project Mgt Bootcamp
Mar. 2-3, 2006 at Atlanta, Georgia
Mar. 23-24, 2006 at Dallas, Texas
Mar. 30-31, 2006 at Washington, DC

Towards Sustainability Conference & Expo
Mar. 7-9, 2006 at Chico, California

National Facilities Management &
Technology Conference/Exposition
Mar. 7-9, 2006 at Baltimore Convention Ctr

PGMS Launches Grounds Mgt Seminars
Mar. 9-10, 2006 at Tempe, Arizona

Management Model for Capital Projects and
Facilities Management Conference
Mar. 20-21, 2006 at Hilton Head, SC

Clay Bricks in the 21st Century: Design,
Preservation, & Care of Contemporary &
History Architecture
Mar. 25-26, 2006 at Cambridge, Massachusetts

ISSA - Staffing and Benchmarking
Mar. 28, 2006 at Atlanta, Georgia

ISSA - Cleaning System Design
Apr. 5-6, 2006 at Las Vegas, Nevada

National Conference on Bldg Commissioning
Apr. 19-21, 2006 at San Francisco, California

Infrastructure Solutions Summit: Moving from
Awareness to Action
Apr. 25-26, 2006 at Washington, DC

Research Buildings 2006
May 1-2, 2006 at Boston, Massachusetts

For a complete list of upcoming APPA events
please go to: www.appa.org

President's Message - Reflections

Every year in this country we begin the New Year by setting resolutions or setting new goals. How many items did you have on your list? Do you remember what you were going to do? Are you still doing it? Are you waiting for next year? Are you staying status quo? I decided "none of the above".

So this year I did something different... I stopped and looked at the 20 years I have been at Colorado State University. It seems like just yesterday that I started working here. I asked myself if I have made a difference. Sometimes I think we look at the things that we didn't get accomplished to determine our outcome.

At a conference I attended early in my career Dr. W. Edwards Deming was speaking. He stated: "It takes hundreds of small steps to successfully complete the process. Success is determined by each of these small improvements". Remembering Dr. Deming's words, I began asking myself what small improvements have been made. One improvement I have been working on is the aesthetics of the campus. When I came here I thought the campus was bleak, harsh and needed help. I thought it would take forever to have an effect. I have worked on planning, design and construction projects for the past 20 years and can now see a campus that is friendly, inviting, and aesthetically beautiful.

The weather has been great for this time of year so I have been walking a lot more, but I'm taking time to stop and notice small things that have changed in my time. I have a poem on my door I received from a friend that comes to mind. Emily Dickinson called it "The Mountains Grow Unnoticed":

*The mountains grow unnoticed,
Their purple figures rises
Without attempt, exhaustion,
Assistance or applause.*

*In their eternal faces
The sun with broad delight
Looks long—and last—and golden,
For fellowship at night.*

Sometimes I hear people comment, "What difference does it make about the campus, the students are only here for four years?" We have an opportunity every year to affect hundreds of thousand of students with our facilities and grounds. Sometimes we just don't notice what is in front of our eyes. In the beginning I wanted to be noticed, now I just want to bask delightfully in the sun unnoticed. As the campus has changed so too have I. I see the campus as rough but beautiful and ever changing. I see how each of us can make a difference over time by doing one small step at a time.

Some of the small steps available to us are RMA, APPA by supplying education, networking, leadership and friendship. I'm wondering if RMA has made a difference in your work experience or your life. RMA is looking for you to contribute just one small step in this coming year. We are forming new committees that need your input. Join us in creating tomorrow's future in RMA.

We are looking for individuals from each state to serve on the following committees:

Awards & Recognition Committee, George Stumpf Chair, george.stumpf@uchsc.edu
Membership Committee, Nancy Hurt Chair, Nancy.Hurt@ColoradoState.edu
Information & Research Committee, Lorenzo Cotton Chair, Lorenzo.cotton@pima.edu
Professional Affairs Committee, Dave Button Chair, dave.button@uregina.ca
Educational Programs, Polly Pinney Chair, polly.pinney@asu.edu

The future is ours to shape.

Tommy H Moss

RMA Members on Ballot for APPA Offices

By Dave Brixen, Arizona State University
Senior Representative

Even though RMA is the smallest of regions it has a very rich tradition of providing officers for APPA. This year's upcoming election is no exception.

I am pleased to announce that two of our RMA members are on the ballot this year for two Vice President positions. Harvey Chase, University of New Mexico is running for Vice President Information and Research. Polly Pinney, Arizona State University is running for Vice President Education.

The complete slate of candidates is as follows:

President Elect

Alan Bigger - Notre Dame
Sam Polk - Tennessee State

Vice President, Education

Polly Pinney (RMA) - Arizona State University
Al Stoverink - Arkansas State University

Vice President, Information and Research

Harvey Chase (RMA) - University of New Mexico
Mike Sofield - Smithsonian Institute

More information about each of the candidates will be posted soon on the APPA website, so please check it out.

RMA has an opportunity to have members in important positions, so don't forget to vote! Even though RMA is small in comparison, we can be heard loud and clear if all of the institutional representatives vote.

State/Province Reports

Alberta/Saskatchewan Report

Correspondent: Greg Weins

The University of Lethbridge

By Doug Parker, Physical Plant Director

The University of Lethbridge Regional Health and Wellness Centre will serve the community's fitness and recreation needs and facilitate academic research in kinesiology and health sciences. A recent agreement between the University and Calgary-based Canadian Hydro Developers, Inc. will ensure that the health-promoting facility will have an environmentally friendly power supply.

Physical Plant Director Doug Parker says the "green power" will come from a sustainable natural resource that is readily abundant in southern Alberta — wind.

"We are purchasing 850 megawatt hours of electrical green power per annum, which equates to the annual production of one windmill. The University has agreed to purchase the power for 10 years, with an option to extend the contract for an additional 10 years," says Parker.

The power has been purchased for the new portion of the Regional Health and Wellness Centre, which is scheduled to

open in June 2006. The 850 megawatt hours of electricity are expected to meet 100 per cent of the facility's annual power needs.

"As a publicly funded institution, it is important for the University to demonstrate environmental stewardship and leadership. Incorporating green power into the Regional Health and Wellness Centre will increase awareness that environmentally sustainable electricity is viable," says Parker.

In 2002, the Voluntary Challenge and Registry Inc. (VCR Inc.) awarded the U of L a gold medal that recognized the University as a leader among Canadian educational institutions for energy conservation and emissions reductions.

Conservation methods have included retrofitting older buildings with more efficient lighting, heating and air-conditioning equipment and incorporating energy-saving features into new buildings. The energy-efficient one-megawatt cogeneration unit that was installed in 1981 supplies a third of the University's power needs.

This commitment to environmental conservation is reflected on the University's energy bills.

"The energy consumed on campus has basically remained the same since 2001, even though we have added the LINC building. In essence, we have been able to add another building to campus without increasing our total power consumption," says Parker.

The University will continue to plug into sustainable power sources as they become available and economically feasible.

"The University of Lethbridge tries to make environmentally conscious decisions that will promote health and wellness in our community. Wind power is a southern Alberta based technology that it is helping to diversify the region's economy," says Parker.

To learn more about the Regional Health and Wellness Centre, please go to <http://www.uleth.ca/hwc/>.

Arizona Report

Correspondent: Dave Brixen

Arizona State University

By Joseph Metzger, Asst. Director Facilities Management

The big news here is drought: As of this writing there has not been measurable rain in the Phoenix metropolitan area in 132 days. We have suffered our first wildfire of the season (an oxymoron since that season hasn't started yet) and there are dire predictions for much more to come.

ASU continues its massive construction program with substantial infrastructure improvements and three major facilities coming online this fiscal year: the second Interdisciplinary Sciences Technology building (ISTB-II), the second Arizona Bio-Technology building, and the Central Heating and Power building (which will in the future include co-gen capability). On the planning board are a new DPS facility, a third ISTB building, a new Construction Engineering facility, and an expansion on the residential area south of campus. For more, check out our Capital Development Plan at: <http://www.asu.edu/cdp/>.

Complicating our construction congestion is the ongoing light rail construction and infrastructure improvements for the City of Tempe in the area immediately surrounding campus.

Recent approval was given by the Arizona Board of Regents to replace three of our university enterprise data processing systems: Student Information Systems, Human Resources Management System, and the Advantage Financial System. All of these will be phased out over the next five years to Oracle's PeopleSoft ERP. This will have a major impact on the way that we all do business at ASU.

Additionally, University Services (of which Facilities Management is a part) has put forward a proposal to replace our aging CMMS system. We will be implementing an enterprise Facilities Management system that will include Space Management, Spatial Data (CADD), Capital Programs, and Facilities Maintenance modules, among others.

It is said that the only constant is change. Arizona State University has embraced that concept and taken it to a new level. A New American University, like the proverbial Phoenix, is rising in the midst of the desert.

Colorado Report

Correspondent: Al Mages

Mesa State College

By Erik Van De Boogaard, Director of Facilities Services

Mesa State College is moving aggressively forward in its campus expansion. For the past ten years a partnership between the foundation, city, and county has resulted in adding nearly 5½ acres to the campus and allowed for the physical closure of a city street that bisected the campus north and south resulting in what is now a pedestrian plaza. The college has torn down nearly 30 structures in the last 18 months to make room for future building sites and temporary parking.

A new residence hall is currently under construction. The 80,000 plus GSF building will provide 282 new beds to the housing inventory and will be the first residence hall to include single bedrooms within a living suite. Construction of the hall began in the fall of 2005 and is scheduled to be completed by the fall semester of 2006.

A new campus services building to house purchasing and facilities services is scheduled to break ground this spring. It will allow for the re-location of these operations off the main campus freeing up prime real estate for academic use. The old facilities shops will be converted into much needed classroom space.

The campus will also embark on the design and construction of the first of multiple parking structures. The design team has been selected and site analysis is underway.

We continue to press for state funding for a new classroom building and while a cash portion has been approved by the legislature, we are hopeful state funding will return and allow for this much needed expansion of primary educational space.

Programming efforts are almost completed for the Saunders

multi-use facility. This project will be a multi-year project addressing deficiencies along with added athletic programs.

A new soccer field with underground parking, new natatorium, renovation and expansion of recreation, athletic, office and classroom spaces, and the reconfiguring and expansion of practice/playing fields including new tennis courts with parking below.

Other programming efforts just underway will take a look at the campus college center. This building was designed for an FTE of 2,500. Last fall the FTE was in excess of 6,000.

These are just a few of the things occupying the staff at Mesa State College outside of the normal day to day.

Regis University

By Michael J. Redmond, Director of Physical Plant/Capital Projects

Regis University is continuing to proceed with their 20-year Master Plan, currently in its sixth year. In February, the K-Mart facility is scheduled to be demolished. Regis has leased the land to K-Mart since 1965, and will now construct a soccer field and lacrosse pitch along with reusing 503 existing parking spaces. The University is currently at the end of schematic design for the total renovation of the general Science Building also located on the Lowell Campus. This facility was constructed in 1966 and will undergo a total remodel. Construction is projected to begin in the spring of 2007. As projected growth in the Regis College program goes forward, additional housing will also be needed. The University is working with a development firm in designing and building additional student residential apartments. This endeavor will be through an off-balance sheet privatized housing agreement. If all criteria are met, the University will house students in this new facility in August 2007.

Taking advantage of its unique elevation and campus locations the University has entered into a long term agreement to allow T-Mobile to install a telecommunications transmission site in a new cupola installed on Main Hall. Regis University is the highest land point in Denver County. This makes telecommunications transmission very advantageous to communication companies. By secluding the transmission towers in the existing facilities architecture, both T-Mobile and Regis are in a win-win situation. The reinstallation of the cupola on Old Main built in 1887 was a major milestone for the University. The original cupola was removed in 1951 because it was hit by lightning and had structural problems. The new cupola now stands as an original landmark to the Denver area and a beacon for this fine institution.

As the Master Plan progresses, more updates will follow.

University of Colorado at Boulder

By John Morris, Director of Physical Plant

The challenge of organizational change lies not in the mechanics of making change, but in addressing the cultural norms that define the current organization. This begins with first identifying the need to change and having the willingness to honestly examine every aspect of the organization. Such is the case at the University of Colorado at Boulder.

After successfully implementing a new work order management system, it was time to take the next step to review the organizational practices to promote effective asset management, improve customer service and to capture opportunities for improvement. In order to accomplish this goal Facilities Management has developed an Operations Steering Committee that guides a number of sub-committees. These sub-committees include a Work Order Process Review Team, a Shop Planning/Scheduling Team, a Customer Service Team, an Inventory Management Team, a Preventative Maintenance Team and a Reporting Team. Each sub-committee is comprised of a cross-section of employees who coordinate to accomplish their given charge.

There are a number of resources available to help guide the Operations Steering Committee, and a few in particular include APPA's Core Data Survey, APPA's Creating A Service Culture (highly recommended), APPA's Facilities Management Evaluation Program (FMEP), and the RMG Reliability Management Grid. The department leaders have accepted the concept that I have borrowed from Charlie Jenkins – this is a journey similar to climbing a mountain that has no summit: you just have to learn to love climbing! It is exciting and my pleasure to work with individuals who are willing to accept the challenge of implementing process improvements and the resulting organizational change.

The University of Colorado at Denver and Health Sciences

by David C. Turnquist, Assistant Vice Chancellor, Facilities Operations

The University of Colorado at Denver and Health Sciences Center is undergoing massive changes at the moment, in the figurative and literal sense. We have received approval to proceed with the construction on the buildings that will be funded with the certificates of participation. The construction fences have already started to spring up around the Fitzsimons campus, and has made getting around a challenge.

The buildings that will be constructed include two education facilities, two academic office buildings, a library, a humanities building, and a FACILITIES SUPPORT building (yes- we get our very own building instead of finding space in the basement or a Quonset hut as most facilities groups have to work out of). Construction started late last year on our new 500,000 gsf Research Complex II, to match the 600,000 Research Complex I.

Meanwhile, the campus continues to grow with the newly opened Barbara Davis Center for Childhood Diabetes, the Larazza Center for Oral/Facial Health, both UCDHSC buildings, the Children's Hospital (relocating from downtown Denver) scheduled to open in late 2007, and the University of Colorado Hospital (already opened and fully functioning hospital and emergency care) with continuing expansion of their facilities. A great website to look at the entire campus is <http://www.uchsc.edu/fitzsimons/projects/>.

With Dave Wergin, previous director of Environmental Health & Safety at the Boulder campus, retired but busier than ever leading a team of in-house experts at UCDHSC, planning is underway for the remediation of the Colorado Blvd campus. The basic plan is to construct the buildings at Fitzsimons, then move everyone from Colorado Blvd, then take

out the environmentally regulated materials (asbestos, lead, mercury, CFCs, etc.) then turn the buildings over to the developer. Some of the remediation will be done with in-house staff from Facilities Operations and Environmental Health and Safety, while Facilities Projects staff will manage the asbestos abatement contractor.

Needless to say, we are very busy, but enjoying every moment and every challenge.

University of Northern Colorado

by Kirk Lechlitter, Director, Facilities Management

At UNC, our normal Christmas break rush of small projects was interrupted by a broken pipe in the lower level of our Library building. The water ran for up to 60 hours prior to discovery. We are just finishing the drying of around 65,000 SF. Most of the flooring replacement and other water related issues will be completed this summer.

Our planning and Construction folks are busily working to select the team for our first large (\$63 million) design build project. We are replacing an existing residence hall with a series of smaller halls with just over 700 new beds. We are also replacing 6,000 LF of high temp hot water main line, construction of two synthetic sports fields and a new soccer complex. It promises to be a couple of very busy years.

Idaho Report

Correspondent: Anna Weskerna

To the members of RMA, thank you for allowing the State of Idaho to be a part of your organization, and thank you to Joseph Metzger, newsletter editor, for this opportunity to tell you about some of the great things happening at our major institutions.

Brigham Young University – Idaho

by Charles Andersen, Physical Facilities Director

The BYU – Idaho Physical Facilities Department has experienced quite an impact from the announcement made five years ago to move from Ricks College, a two-year college, to a four year university. We have seen an increased enrollment and utilization of the facilities and campus with the new Activities Program that took the place of intercollegiate sports which was cancelled. The Activities Program serves over 6,000 students compared to the athletic program that served approximately 1,000 students. This is why we will be adding additional play fields and improving the stadium field over the summer of 2006 to support the programs.

Then there is the three-track system and increase in student population. Students are assigned either Fall/Winter, Winter/Summer, or Summer/Fall tracks to attend at the campus. We currently have as many student during the summer as we did in the fall when it was Ricks College. This will only increase over time to allow 11,600 FTE in each track. We have to schedule more effectively our maintenance and support services so that we can keep the buildings clean, the grounds beautiful and classrooms and activity spaces ready.

In addition we have been in an intense major planning and construction mode. Just since the announcement five years

ago, we have seen the construction of the Gordon B. Hinckley Building; the Spori Replacement Building; an addition and remodel to the Austin Building; an addition to the Benson Building; an electrical substation and a new Student Health and Counseling Center, the University Village (married students) Apartments and the Thomas E. Ricks Classroom Building. We have completely remodeled the Clarke Building and Romney Buildings, over 100,000 square feet, in just under four months between winter and fall semesters of this year. This is something we hope we never have to live through again! It was an intense summer for everyone involved.

On top of all of this, there is an addition currently under construction on the Snow Performing Arts Building and additions and remodels being planned in the Manwaring and Hart buildings, starting early in 2007. The impact on campus and facilities has been and continues to be substantial. It has been and continues to be a wonderful place to work. We look forward to what each day brings and what the future has in store for this great university.

Boise State University

by Steve Swain, Director of Facilities Operations/Maint

Boise State is just finishing up the construction of an 88,000 sq ft indoor practice facility. This facility will be used for football practice during inclement weather, intramural sports, and various special events. We have also begun construction of a new 59,000 sq ft Interactive Learning Center that will add much needed classroom space to the campus. This construction is just the beginning of an ambitious expansion plan for the university, which was unveiled in a recently completed Campus Facility Master Plan.

Our 7.9 million dollar Energy Performance Contract is also proceeding well. As a part of this contract, we are currently working with the city of Boise to bring geothermal water to the campus as an energy source to heat campus buildings. We are very excited about this proposal because the use of this renewable energy supports the sustainability efforts on the campus. We have also recently developed an integrated pest management program for our Landscape Services operation in support of this initiative.

Idaho State University

by Anna Weskerna, Physical Plant Management Assistant

Idaho State University was founded in 1901 as the Academy of Idaho with 10 acres of land, and the first three-story campus building was opened for students in the fall of 1902. After several name changes from Idaho Technical Institute, the University of Idaho – Southern Branch, and Idaho State College, ISU attained full university status in 1963.

Since its inception the University has continually grown in size, scope and stature. Today the main campus has 103 buildings with 2.75 million square feet and 243 developed acres of its total 1,100 acres. The campus has seven colleges and is the state's lead institution for health professions. Enrollment has steadily grown to a Fall 2005 FTE of 14,361 students. The University also includes a campus in Idaho Falls and has numerous outreach centers throughout the state. The Physical Plant Department Transportation Services runs six buses every day from as far away as 100 miles bringing students to the campus.

A short list of current major projects includes: (1) A new Rendezvous Building located in the center of the campus and scheduled for opening fall semester of 2007. This 255,000 sq ft facility will house numerous venues such as classrooms and study areas, large lecture hall with a domed planetarium, meeting and computer rooms, 72 student apartments with 301 beds, dining areas and an ISU Spirit retail shop.

(2) The University is working with the State of Idaho, the Idaho National Laboratory and DOE for a Center for Advanced Energy Studies (CAES) in Idaho Falls designed to become a world-class, advanced, energy organization with an emphasis on nuclear energy. It will address areas that are critical to U.S. energy security and leadership in the global energy arena.

(3) A new 24,000 sq ft aquatics addition to Reed Gymnasium is planned for construction this year. It will include a new 50-meter, 10-lane swimming pool, diving well, indoor jogging track and a weight/fitness area, and will meet IAA requirements for swimming and diving programs.

Opened in the fall of 2004, the L.E. and Thelma E. Stephens Performing Arts Center is a magnificent addition to the campus. Located on 16.8 acres, high on a hill on the perimeter of the campus, this 123,000 sq. ft. facility was built with primarily private funds and is anchored by a 1,200-seat Grand Concert Hall. It includes a spectacular rotunda used for many events, a 446-seat thrust theatre; and a 200-seat black box theatre, along with housing the University drama department.

More in-depth information on these and other projects will be provided in future newsletter publications. With the continual growth in space and programs of the University, we are extremely excited on what the future holds.

University of Idaho: Silver, Gold, and "Green"

by Mike Lyngholm, Steam Plant Manager
and Mike Holthaus, Water System Manager

The University of Idaho lies nestled in the rolling hills of the Palouse Prairie in the northern part of Idaho. As a public land grant institution, the University has primary responsibility within the state of Idaho for performing research and granting the PhD degree. Enrollment exceeds 12,500 undergraduate and graduate students, with most on the main campus in Moscow, Idaho. The University maintains branch centers in Coeur d'Alene, Boise, and Idaho Falls, as well as extension sites in nearly all Idaho counties.

Although ranked highly among its peers for its wide range of undergraduate and graduate programs, significant research activities, and wireless computer networking capability, the University of Idaho is less well known for two significant conservation projects that have been functioning quietly and efficiently for over twenty years. "Sustainability" is the latest, high impact catch-word in the public and private vocabulary today, yet the University of Idaho has been "green" for a long time.

The first project of note is literally a "green" project. In 1979, the University began irrigating campus lawns with treated effluent from the local treatment plant. The impetus for this initiative was the decline of the deep aquifer, which has served as the Moscow's primary water source for decades. In the 1970s, the University was considering options

for water to irrigate its playing fields, golf course, and expansive campus green spaces. With no available surface water, the University looked to the discharge from the City of Moscow Waste Water Treatment Plant, located on the western edge of campus.

With an initial infrastructure investment of \$200,000 in 1979, the University began irrigating with the treated effluent and saved 25 million gallons of deep aquifer water in that first year of operation. Since then, the capacity and coverage of the system have gradually increased, with 90% of campus irrigation utilizing reclaimed water in 2005. Over the years, the University has invested an additional \$1 million in the system, with another \$200,000 in chlorination and backup pumping capacity to soon be added. The system currently saves up to 120 million gallons per year from the deep aquifer and serves 225 acres of the campus.

Production costs for reclaimed water are 30% higher than costs for an equal amount of well water, primarily due to stringent regulations associated with the use of treated effluent. Even so, those costs remain under seventy cents per hundred cubic feet of water. Although the University has developed new buildings and significantly increased student population in recent decades, current domestic water usage is more than 20% below the average usage over the last twenty years.

The second large sustainable endeavor at the University of Idaho is the wood-fired boiler at our central heating plant. In the mid 1980s, the UI installed a wood fired boiler to replace one of the aging coal/gas fired boilers. The cost savings were so significant that the wood boiler soon became the main heating source for campus, producing an average of 40,000 pounds of steam per hour. This boiler supplies 90% of the campus heating needs at a cost currently one fourth that of natural gas. This savings amounts to \$2 million per year in fuel costs.

Cedar chips, available from local sawmills, provide most of the fuel. Bark, shavings, ground wood waste from landfills, and landscape debris from local tree trimmers have also been mixed in at various times. Renewable wood fuel comes from trees grown on local company-owned tree farms, and the owners are diligent in planting and promoting growth.

The CO₂ produced through combustion is the same as would have occurred through natural decay or forest fire. Thus, the boiler emits no additional green house gases into the atmosphere. Fuel payments to local companies stay in Idaho, benefiting the economy and tax base, instead of going to West Coast pipeline companies and Canadian gas suppliers. Since the University is tax supported, we, in effect, give the state and ourselves a rebate by buying fuel locally.

The wood boiler requires a larger staff to operate and maintain and extra equipment to stockpile fuel for the peak winter loads. Additional costs run \$200,000 per year, only a tenth of the \$2 million saved in fuel costs over natural gas. Rising energy costs and increasing environmental awareness drive interest in sustainable energy sources. The University of Idaho has been a leader in biomass conversion, successfully utilizing wood chips for twenty years, and is continuing to seek ways to expand the use of clean, sustainable energy to provide healthful and comfortable living and working environments at the University of Idaho.

Both the reclaimed water irrigation system and the wood

fired boiler are outstanding conservation measures in action at the University of Idaho, each successful due to the foresight, hard work, investment, and commitment of those operating and maintaining the systems. Through these unique solutions, the University is meeting today's campus needs and fostering a brighter tomorrow.

Montana Report

Correspondent: Bob Lashaway

Montana State University

By Bob Lashaway, Assoc Vice President University Services

Energy issues continue to be a major focus of our attention in the state of Montana and here at Montana State University. As the responsible steward of MSU's utilities budgets, the Office of Facilities Services (OFS) has implemented over \$3.3 million worth of energy conservation projects comprised of heating, ventilating and air-conditioning controls modifications, building envelope improvements, lighting retrofits, and central boiler efficiency improvements over the past decade.

Unique among larger universities, MSU's Central Heating Plant annually changes from its standard 24-hour/day winter operation schedule to a 2-shift/day (16-hour per day) summer operation from commencement to the beginning of fall semester. This conserves ~\$100k+/year in utility and labor costs at current energy prices and should pay increasing dividends as energy prices continue to escalate in the future.

MSU OFS was a leader in the state in the early 1990's, bidding our own interruptible natural gas contract, that resulted in gas costs to MSU of \$1.1 million less than what we would have paid under the regular prevailing gas tariffs paid by other state agencies for the same period. We continue to purchase gas in the de-regulated market, securing the best, minimum-cost scenarios available from the prevailing market.

In 1991, MSU OFS installed an electric co-generation turbine unit (~1 megawatt) in the Heating Plant, which annually contributes 4%+ (in dollar value) of the campus' electricity consumption. To date, the co-generation unit has produced over \$1.3 million in avoided electricity costs during its service life. In addition, when MSU replaced its primary electrical distribution system in the 1990's, we tripled the distribution voltage, which reduced distribution losses and produced commensurate savings.

While MSU's 20-year consumption trends have indicated steady growth in electric usage and demand levels, MSU's gross natural gas consumption in recent years has been lower than it was 20 years ago. Although this comparison is not weather-normalized, the relative use levels still speak positively about conservation efforts in light of the many new facilities that have been constructed during that period (many of which are costly, high-energy-use, high-ventilation-rate science and laboratory type buildings).

Construction of the MSU Utility Tunnel system (about 8000 feet worth) allows core utility systems to migrate into the protected tunnel environment as existing systems fail, greatly improving system reliability, expansion flexibility and longevity when compared to the previous direct-buried installations.

MSU's gross municipal water consumption has also declined during that period, due primarily to much-improved water management practices for irrigation, including the use of untreated, and much less expensive, surface-water sources rather than treated, potable City water.

Utah Report

Correspondent: Brian Nielson

University of Utah

By Pieter Van Der Have, Director Plant Operations

Like every other institution across the US, the University of Utah finds itself in that proverbial swamp with the ever-hungry alligators as it attempts to deal with rapidly escalating utility costs. At the most recent accounting, we were projecting our total costs for this fiscal year to exceed our allocations by as much as 60%. This has been the trend for the last 4 to 5 years. Unless and until the budgets receive a sizable infusion, that will continue to be the case in future years. As all of you know, this is because utility costs are escalating much more rapidly than the CPI, and certainly much more rapidly than we are able to reduce consumption through aggressive energy management programs.

We have therefore been faced with a dilemma that can easily be viewed as both a challenge and an opportunity. We have the opportunity to be creative and motivated to reduce consumption, while we have the challenge to educate our bursars that we are in fact applying the best technologies available to mankind so as to mitigate the impact of those rising utility costs as much as humanly possible. It appears that we have realized a re-assuring level of success at this, since our Legislature is at least contemplating (at this writing) a significant bump to our budgets.

Some of the more significant programs we have implemented include:

1. Behavior modification: In partnership with an independent consultant, we are constantly analyzing the way our buildings operate. Interactive discussions with building occupants help us identify operating models that can be improved without adversely affecting the occupants' abilities to be successful at accomplishing their objectives. In the first year of this program, we were able to reduce electrical consumption by nearly 10%. We are realizing further improvements as additional buildings receive the benefit of this analysis and dialogue.
2. Retro-commissioning: In partnership with our local utility company and several private consultants, we are going into buildings less than 25 years old, that were never commissioned (which is almost all of them). We expect to uncover all sorts of issues, possibly identifying operating deficiencies that go back to the first day the building was ours to operate. Similarly, we intend to instigate recommissioning efforts on those buildings that may have been commissioned originally, just to help assure that our people are still operating them in the most effective and efficient manner.
3. Commissioning: Both our and our state's design requirements will mandate that in the future, all projects will receive the benefit of commissioning.
4. Energy Efficient Design: By the time you read this, we

should have a set of design standards in place, accepted and endorsed by the Legislature, that will either approach or emulate the lower rung of LEED. This standard will allow us to require, if we choose, a level of design that is well beyond basic ASHRAE 90.1.

5. Cogeneration: As of yesterday, we are authorizing a nationally recognized energy engineering firm to proceed with initially design of a cogeneration plant. This could ultimately replace two of our HTW generators (boilers) in our Main Campus Plant. It will produce approximately 30% of our base electrical load attached to one of our larger substations, while producing enough waste heat to handle all of our main campus' heating load. The cost avoidance associated with that type of output could well fund the entire project. Clearly, the costs of natural gas and purchased electricity (and the relationship between those two) will play a huge factor in determining the economics of this project. All of us do already recognize the other advantages to the University associated with this investment, even today and even beyond the economics.

For questions or clarification, please drop me a note at: pete.vanderhave@fm.utah.edu

Dixie State College

Dixie State College is moving off the main campus. The new Health Sciences Building will be built on the campus of Intermountain Health Care's Dixie Regional Medical Center. The building site was made possible by a two-acre property donation by IHC and another two acres donated by the For-master Family.

The 80,000 square foot building is the beginning of a new partnership between Dixie State and IHC. The College will provide a training facility for the different health occupations, and the Hospital will be close at hand for pre-graduate clinicals. The facility will also provide classroom space for current hospital employee in-service training.

The new facility will provide a center of learning for nursing, dental hygiene, respiratory therapy, radiology and surgical technician. It will also have its own computer center and student lounge. The specialized facility will help make a positive impact on the shortage of health care professionals. Moving off campus does bring some new challenges for the Campus Services Department. The new building will have stand-alone utility systems and the maintenance personnel will not be housed at the site. Although the site is only approximately one mile away, this still poses some problems for maintenance staff, moving from one campus to the other. A helpful factor will be the fiber optic connection back to the main campus for energy and HVAC systems management, fire alarm systems, security systems and data/voice systems.

Wyoming Report

Correspondent: Frank Fox

By the time you receive this I will be on terminal leave from the University. After 27yrs and 8 months I have decided to pull the pin and spend some time with my children. I started my professional career in the U.S. Army which lasted for eight years this included 3 tours in Vietnam. Got out and

received an MBA from the University of Wyoming, then 3 years as a Banker. Answered an advertisement for a Senior Draftsman and have been here ever since winding up as the Associate Director of Buildings and Grounds. I have had the privilege of working with and for some of the finest people anywhere, knowledgeable, dedicated, loyal, etc. it has been a very pleasant experience.

University of Wyoming

By Frank Fox, Assoc Director Buildings and Grounds

Snow Removal:

Here at the University of Wyoming we have a "Physical Plant Snow Removal Policy" that dictates when, where, and how the snow is to be removed.

The objective is to provide safe access to the campus between the hours of 7:00 a.m. and 10:00 p.m. seven days a week. In the case of a severe blizzard the objective will be to keep at least one handicapped accessible entrance open to every facility from the entrance to an area accessible by a vehicle. This entrance is to have the snow removed to the hard surface and free of ice. Removing the snow and ice to the hard surface caused a decrease of 70% in the number of reported slips and falls on the campus.

Priorities:

The areas to be cleared, to the hard surface, in order of priorities are as follows:

- The Central Energy, for the delivery of coal
- Special Events
- Handicapped access to all facilities
- Vehicular access to the handicapped entrances
- Handicapped Parking spaces
- Parking lots for temporary vehicle storage – Shuttle and Union lots
- Pedestrian Walkways
- Staff Parking Lots
- Resident student parking lots

In the event the President of the University orders the University closed because of extreme weather conditions, essential Physical Plant personnel shall continue to work to clear access to University facilities. Snow removal and ice removal operations will be suspended if, in the opinion of the Physical Plant Director or his designee, weather conditions endanger the lives of the employees involved with the operation or renders snow removal efforts ineffective.

Dirt:

Now this is an interesting subject. A number of years ago 13 large apartment buildings were constructed adjacent to the campus and the contractor asked for permission to stockpile the excavated dirt on University land next to the construction site. At the time fill dirt let alone top soil was very scarce in this area. Sounds relatively simple right. Well in the past several years there have been more issues concerning: whose dirt is it? who has access to it? various other individuals using the site as a dumping ground or simply hauling off dirt/topsoil and leaving dangerous vertical slopes, kids playing on the hills digging caves in the sides of it. Throwing it at one another. I had no idea that a simple pile of soil could cause so much turmoil.

Education Update

By Polly Pinney, Arizona State University
RMA Education Chair

Supervisor's Toolkit has now been presented in Arizona, Colorado and Utah. A total of 19 member schools have registered 81 staff. Future plans include New Mexico and Montana.

RMA is still searching for members who wish to be part of a new Regional Education Committee. If you or someone in your organization is interested, please contact Polly Pinney (480) 965-6109. We hope to have a representative from each state.

Editor's Corner

In that Classic Masterpiece [Star Trek II: The Wrath of Khan](#) Captain Spock comments to Commander Saavik "For everything, there is a first time...."

This is my first issue as your editor and it is my hope that I have approached the level of quality so consistently accomplished by Esther Federico and Paul Smith. We had an amazing response from the state correspondents for this issue. An editor's job is so much easier with such a wealth of content.

In recent correspondence I commented on Arizona having some of the most congenial weather in these United States. Well, it's a dry congenial... very dry. The continuance of our drought after a brief respite last year has finally got some folks realizing that we do indeed live in a desert. When I solicited your stories of inclement weather for this publication I had no idea of what was to come and beg your pardon for my less than sympathetic regard for your trials and tribulations caused by all that rain and snow!

It was interesting to read the President's Message and see an Emily Dickinson poem, for his narrative very much reminded me of another poem; Robert Frost's "Stopping by Woods on a Snowy Evening". Tommy's message conveys to me the image of a person well satisfied and pleased with his journey, stopping for a moment to reassess and rejuvenate. And yet, as in Frost's poem, there is a sense of urgency and a desire to continue, of having "promises to keep" and "miles to go" before sleep. Well said, Boss.

Speaking of a sense of urgency, it is my observation that Facilities Management people have a propensity for vesting nicknames upon their colleagues. This has given me pause... as your **Normally Agreeable Gazetteer** I am somewhat disenchanted with the legacy which may become mine. It is therefore desirable that I consider another, more suitable moniker and am actively seeking proposals for such.

One does not work in facilities management with the expectation of receiving much in the way of affirmation; we are by necessity a self congratulatory lot. I am well satisfied that this first newsletter has been successfully assembled and distributed, and congratulate myself on the accomplishment.

That said; please do let me know what works for you and what does not. This is your newsletter and it is my desire that it serves your interests and needs. - JM



January 31, 2006

The Host/Planning Committee from Montana State University – Billings invites you to join us in Billings, Montana for the 54th Annual RMA Educational Forum on Thursday, October 19th through Sunday, October 22, 2006. The Forum will be held at the MSU-B Downtown Conference Center as well as the nearby Sheraton Hotel.

The 2006 RMA Educational Forum will offer a wide variety of topics designed specifically to address the issues confronting our facility managers and professional tradesmen. Additionally, we have arranged for many of our Regional Business Partners to have the opportunity to demonstrate the latest technology, share knowledge and experiences which can greatly assist in meeting today's demands.

Logan International Airport is a full-service airport and is located approximately 5 minutes from the heart of Billings. The hotel provides free airport shuttle service.

We hope you will mark your calendar and plan to join us in Billings this October. Please visit our website for the most up to date information.

SEE YOU IN OCTOBER

"Seeking New Frontiers"

www.msubillings.edu/RMA2006

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

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.

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FUTURE MEETINGS

2006 Annual Meeting
2007 Annual Meeting

Billings, MT
Albuquerque, NM

Montana State University
University of New Mexico