



## President's Message

I have just recently returned from my first visit to APPA's headquarters in Alexandria, Virginia and my first APPA board of directors meeting. Allow me to begin by stating that we all should be very grateful and proud to be associated with such a wonderful association. We are financially sound, we have a dedicated head office staff headed by the tireless and dedicated efforts of the executive vice president, Lander Medlin and we have dynamic programs in learning, leadership and research in most areas of our facilities profession. I have summarized some of the highlights of the meeting that will be of interest to you.

The Globalization Task Force presented a preliminary report to the board. The task force presented a matrix overview of suggested "Guidelines for Engagement" for APPA to follow when considering the engagement of other international facilities organizations or institutions. This set of comprehensive guidelines recommend certain standards and minimum requirements for various levels of membership. A final report from the task force will be presented at the summer board meeting in Nashville.

The certification task force presented a report on their findings related to certification. After engaging the services of a professional survey firm it was recommended from the results of the survey, that APPA not pursue a facilities manager certification program at this time. The survey said, that most of the membership that responded to the survey did not overwhelmingly support a move toward certification. The task force also reported that the cost of administering the program would be extremely expensive and that the benefits would not support these expenditures.

The annual meeting will be in Nashville, Tennessee from July 27-29 and will be co-hosted with NACUBO. Your conference registration fee will allow you to attend any of the educational sessions hosted by either APPA or NACUBO.

Let me take this opportunity to remind you all to recommend staff in your organizations for scholarships. This is one of the best offerings that we have and yet none of us are taking full advantage of this. Accessing the resources available through RMA and APPA can greatly enhance our organizations, assist us with benchmarking data to defend against budget cuts and provide us with a wealth of information for managing our facilities better.

On behalf of the board of both APPA and RMA I thank you for your membership and ongoing support of RMA and I hope to see you at the annual APPA meeting in Nashville and/or our own RMA conference in Sedona in September 2003.

Steve Baldick  
RMA President



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### APPA Calendar of Events

March 18 - 20  
National Facilities Management and Technology  
Conference/Exposition (NFM&T)  
Baltimore Convention Center

April 9  
Cleaning Equipment for 2003 and Beyond!  
Audio Conference

April 11 - 13  
Beyond Compliance – Campus Greening Through  
Stewardship  
College Park, MD

May 8 - 9  
Construction Owners Leadership Conference,  
Economics of Construction  
Chicago, IL



RMA 50<sup>th</sup> Anniversary Celebration  
September 17 - 20, 2003

## State/Province Reports

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### Montana Report

#### Got Water?

by Jon Ford, Manager  
Environmental Services  
Office of Facilities Services  
Montana State University

As many RMAPPA member campuses have experienced, there has been a significant drought in the Rocky Mountain West in recent years. This has exacerbated water use problems in areas where water availability has long been an issue, and it has moved water use to the forefront in areas where it has always been plentiful. While a drought in the normally dry areas of the Southwest adds insult to injury and is a very difficult situation, policies established long ago are in place to guide those campuses through the hard times. In the wetter areas, however, everything is in a state of flux as the adjustment to the new problem progresses.

One area where water has always been plentiful has been in Bozeman, Montana. In recent years, Montana State University has invested heavily in upgrading the appearance of its campus grounds with the purpose of attracting and retaining students. A key element to this upgrade has been the distribution and use of irrigation water to obtain the uniform and healthy appearance of ornamental plants in the campus landscape.

Until the mid-1980's, MSU had irrigated with filtered, chlorinated domestic water from the municipal system. When the campus would attempt to irrigate with its five miles of garden hose and old-fashioned sprinkler heads, the pressure drop on the system would be so dramatic that the City would call and force MSU to stop irrigating until peak water use periods were over. In 1985, a 4.5 million gallon reservoir and pump system was built as the first step in getting off the limiting City system and utilizing already existing irrigation ditch resources that had fallen into disuse as agricultural research activities had moved off the growing central campus.

MSU has since become heavily reliant upon base stream flow and stored reservoir water for irrigating its grounds. In addition, the use of water from these same sources for agricultural purposes has increased in recent years. Enter the drought.

Although the short-term version of the drought has been in effect for four years, in actuality the long-term cycle officially started in 1977. A cyclic weather pattern that is decades long, the so-called Pacific Decadal Oscillation, (PDO) has been in dry mode since then. These cycles have been going on for centuries, but the scary thing is that, according to the paleoclimatologists, we have been on easy street in terms of water since before we started keeping records. Apparently, around 1000 years ago, and many times before that, droughts much more severe than anything we have experienced would last a hundred years or more. Droughts of that magnitude would make irrigation of ornamental landscapes a non-issue. They would instead cause forced migrations of people and a disruption of our civilization, as we know it. Although it would seem that we are near a reversal to a wet pattern according to what the PDO has been doing during its most recent cycles, the burning question is, what is global warming doing to the system?

In any case, the drought in Bozeman has reached the highest rating (Exceptional) according to the U.S. Drought Monitor. Complicating things, new housing developments along the main distribution ditch servicing MSU have introduced competing interests in the water. This has created doubt about the reliability of the surface water for meeting all of MSU's needs.

As surface water resources become in short supply, the ability to tap underground water has become essential. However, this may affect the neighbors' already-existing wells, so a certain amount of play in the press about MSU's underground interests is expected. The underground water tables are not being replenished properly, so in certain areas, water districts are being created. Such districts greatly limit

new well development so there is a sense of urgency to tap these resources sooner than later.

In response to these issues, MSU first formed a Water Utilization Task Force, which recommended the formation of a permanent Water Utilization Board, charged by the President. One of the primary goals of the Board is to establish short and long term strategies for non-potable water allocation when supplies are short, and decide, as an institution, a hierarchy of which areas to sacrifice. Another is to start a process that will ensure that all water rights are updated and properly filed for the desired type and place of use. The Board established that there is a need to investigate ways to change use patterns to lessen overall consumption and increase efficiency. Finally, the Board will embark on an effort to generate an engineering study upon which to base a capital improvements plan for non-potable water delivery infrastructure.

In conclusion, water use and availability will be an ever-growing concern in future decades, especially for campuses in the western United States. It is becoming imperative that all campuses take a fresh look at their water use patterns and to plan for shortages.

## Wyoming Report



Frank Fox

As with most everyone in the western United States the biggest question at present is if our current drought is going to continue or will the spring snows and rain save our bacon. Here in Laramie and the surrounding region we have gone from dry brown grass to no grass at all in some areas.

A goodly number of ranchers have sold off their herds simply because they were not able to raise the requisite feed to see them through the winter. Of real concern is what measures will be taken concerning the University 18 hole golf course. In a normal summer a million gallons of water can be put on the course during any given night. The blue grass can be allowed to go dormant for up to 6 yrs without harm as long as there is no traffic on it to break the blades off. However the trees, shrubs and bent grass greens will have to be watered or die.

Last fall a number of construction projects were undertaken that removed the sod in various areas of the campus with the thought that this spring they would be resodded. Now due to the drought we are not sure that the

water will be available to accomplish even this. The City of Laramie is currently predicting that they will only be able to supply 65% of the water available last summer and we were on the verge of water rationing last summer.

Integrated Pest Management is a practice that has long been utilized by the University of Wyoming. Not only are the benefits economically sound but also with the ever-increasing number of individuals on campus who are multi chemical sensitive it is the correct procedure. For anyone reading this who is not familiar with the terminology "Integrated Pest Management" is the process consisting of the balanced use of cultural, biological, and chemical procedures that are environmentally compatible the least toxic and economically feasible to reduce pest populations to tolerable levels.

With this winter being as mild as it has been, I don't recall that we have been below zero yet, the insect population could certainly flourish this coming Spring and Summer as we do rely on the freezing weather in assisting us in controlling their numbers.

## Utah Report

By Ellen Newell CGM

It looks like Utah will be in its fifth year of drought. The drought has affected how we do things at Utah State University and some areas have shown stress due to lack of water. Our IPM program has been somewhat modified to handle this challenge. We have never had really significant problems with insects or diseases in our landscape so do very little spraying for them. We spot spray the occasional billbug and do not plant large numbers of borer susceptible trees.

Our primary use of chemicals consists of fertilizers and herbicides. During drought years as well as in normal years, we apply a slow release fertilizer to the lawns in the early spring and various herbicides for the weeds while the water supply is ample and temperatures are cooler. This helps bring the turf to midsummer in a better condition to handle the heat and reduced water. While turf is stressed in July-August we do not fertilize or apply herbicides, as the turf does not need to put on a flush of growth if there is not enough water to support it. Kentucky bluegrass is a cool season turf that naturally grows well in the spring and fall here in northern Utah. During the high summer temperatures, it naturally wants to slow

down, so water can be reduced to just keep it green. The reduced growth also cuts down on mowing. During wet or normal years we spot treat weeds all summer and add fertilizer to high use areas as needed. During a drought year we do not, if the water is not available. A second application of fertilizer is added in the fall as temperatures cool and fall precipitation starts. Herbicides are also applied as needed, this helps the turf enter the winter in better shape and able to compete with the weeds in the spring.

The drought does not affect our weed treatment in shrub or flowerbeds. We use a pre-emergent in the spring and then spot treat as needed throughout the season. We seldom use insecticides in the landscape; our one exception is boxelder bugs.

Boxelder bugs are our number one "bug" complaint. Warm winters bring lots of bugs in the early spring and throughout the summer. Drought does not seem to affect their population on campus. The University has contracted with an outside firm to assist in boxelder bug control in five of our most infested buildings. They assess the building and spray inside and out as well as do any necessary caulking. They will recommend any additional structural work needed to seal the building. They check the buildings monthly. Our in-house crews spot treat the other buildings as needed. Luckily only a handful of buildings are invaded each year.

The Landscape Operations and Maintenance (LOAM) team has been very fortunate to have several individuals on the crew who have initiated irrigation system upgrades and better landscape installation with the administration's support. Over the past decade, we have converted our remaining metropolitan water systems to our secondary canal water, zoned old systems-separating shrubs from turf, replaced old spray heads with newer ones with more uniform precipitation rates, and automated the few remaining manual systems. The biggest improvement was the installation three summers ago, of the Rainbird maxicom satellite control system. This system has allowed us to shorten our watering window from 16 hours to 7. We can now water solely at night, which is great for customer relations and pump efficiency. It has also allowed us to keep the campus watered while we were rationed to a reduced flow of canal water for 6 hours during 24 hour

periods most of last summer. We alternated pump houses each night and prioritized areas to be watered. They were new landscapes, trees and shrubs, flowerbeds, and then turf. Brown turf is most obvious to our customers, but we tried to educate them that brown turf will recover but trees and shrubs might not if stressed too much. They are also much more expensive to replace. This has allowed us to survive the drought with minimal stress and loss of landscapes.

In closing, I would like to put a plug in for membership in PGMS (Professional Grounds Maintenance Society). Budgets are very tight on many campuses right now and new professional memberships may seem like a luxury. I feel now though is when they can be of most value. The members of PGMS are very willing to network and share ideas on problem solving. Please feel free to contact me at [ellen@cc.usu.edu](mailto:ellen@cc.usu.edu) or the PGMS website [www.pgms.org](http://www.pgms.org) for more information.



Dixie State College maintains a central campus of 88 acres located in St. George, Utah. The Southwestern location of the College presents many common desert complications for maintaining a traditional campus landscape. The continuing drought conditions are now presenting an opportunity to rethink the total campus landscape concept.

Currently the campus is served by a pressurized irrigation water system managed by St. George City. Although no restrictions have yet been required, last summer the College established self imposed restrictions and reduced irrigation water consumption by approximately 20%. This stressed many of the plantings but enabled the campus to continue to present an acceptable appearance.

This spring many smaller grassed areas will be transformed to the xeriscape concept with rock area cover and desert plantings. This will allow for sufficient water for established trees, shrubs, public gathering areas and necessary playgrounds. General grounds keeping aside, this summer will present a serious challenge to maintain the campus appearance.

## Colorado Report

By John Bruning

### Aprostocetus Hagenowii and Cashmere Goats

Beginning in May 1998, the University of Colorado began employing the services of a little critter called *Aprostocetus hagenowii* to combat cockroach populations on the Boulder campus. What in the world are those folks in Boulder up to now, you might ask. *Aprostocetus hagenowii* is a parasitic wasp, roughly the size of a fruit fly, which attacks the egg capsule (ootheca) of eight species of peridomestic cockroaches. *A. hagenowii* targets include *Periplaneta americana* (American cockroach), *P. fuliginosa* (Smokybrown cockroach), *P. australasiae* (Australian cockroach), *P. brunnea* (Brown cockroach), *Blatta orientalis* (Oriental cockroach), *Neostylopyga rhombifolia* (Harlequin cockroach), *Eurycotis floridana* (Florida cockroach) and *E. bioleyi*. Quite a mouthful, so to speak!

The trick is that *A. hagenowii* females lay their eggs inside cockroach eggs. The eggs hatch and the developing *A. hagenowii* larvae consume the developing cockroach nymphs. The larvae continue to mature and eventually pupate inside the cockroach egg, where they reach the adult stage. Adults emerge from the cockroach egg by chewing a hole in the eggshell and immediately mate. After mating, the *A. hagenowii* females begin searching for more cockroach eggs. The ultimate cockroach search and destroy tool!

Here are some other interesting facts about *A. hagenowii*:

- Wasps mate immediately upon emerging. Fertilized eggs produce female progeny, unfertilized eggs produce male progeny.
- Female wasps live 7 to 10 days and deposit eggs in hosts within 3-5 days of adult life.
- Females attack 1-3 hosts in their lifetime.
- Developmental time: 36 to 40 days (egg to adult), dependant on temperature.
- Average number of female progeny per host: 40 to 45.
- Sex ratio: 80% females.

The parasitic wasp program is one the biological non-toxic methods used in the Integrated Pest Management (IPM) program on the Boulder campus. During our early investigation of IPM techniques, we discovered the work of Dr. Barry M. Pawson, President of PNE, Inc. Dr. Pawson studied at Texas A&M University and now runs his business out of North Ridgeville, Ohio.

Initially, through five releases, 79,585 female *A. Hagenowii* were placed in the underground utility tunnels throughout campus. Previous trapping and monitoring had been conducted to determine where there were concentrated cockroach populations and breeding areas. Rather than dealing with pests where they are seen, IPM initiates controls at the source of the problem: infiltration (access points), habitat and food. Along with the *A. hagenowii* stocking, "sentinel bags" containing cockroach eggs were placed at strategic locations in the tunnels. By monitoring the mortality, due to parasitism, of the cockroach eggs in the sentinel bags, we were able to gauge the relative efficacy of the parasitic wasp program.

Despite some early problems with handling and *A. hagenowii* mortality due to extreme temperatures, we began seeing very positive declines in cockroach populations through a continuing trapping program at each location. Now we are on more of a "maintenance" program with the *A. hagenowii*, as we are able to strategically do releases where they are needed, based on monitoring and trapping results. No, this program isn't cheap...but we knew going in that the cost was front-loaded and that this is a long-term solution for cockroach control.

We are also using biological control methods on noxious weeds. For the past three years, we have brought in a herd of 500 Cashmere goats from Jackson, Wyoming, to graze on noxious weed populations in open areas rather than spraying. The goats prefer weeds over grasses and by carefully monitoring and moving the herd, from area to area, natural grasses are left to "push out" the noxious weeds. As the herd grazes, native grass seeds are spread in each area that are tilled into the ground by the goat's hoofs and fertilized by the goats as well. After three years of this grazing program, areas that were previously highly invested with noxious weeds are now predominately populated with native

grasses. We have estimated this biological weed control program to cost about \$42/acre/year.

After about six years of progressively demonstrating success using Integrated Pest Management techniques, the UC-B campus adopted an Integrated Pest Management policy in March of 2002. Despite some initial concerns from the campus administration that this policy would increase our costs and limit our ability to respond to pest problems, the program has proven to be effective in managing pests while controlling costs and is highly supported by the students and faculty.

Aprostocetus hagenowii and Cashmere goats, non-toxic approaches to successfully managing pests. Only in Boulder you say? You might want to give it a try!

### **New Mexico Report**

By Brother Ron Bartusiak  
College of Santa Fe

On November 8, 2002, the College dedicated the new Rosemarie Shellabarger Tennis Center. The state of the art center for a college here in the Southwest. The center Cost 4.5 million and includes: six indoor courts with locker and shower room facilities, an entrance lobby, reception area, a Pro Shop with a second floor lounge area looking down into the lobby from a balcony.

The center was designed by Oru Bose International, in connection with an Albuquerque architect Decker/Perich/ Sabatini. Klinger Construction, of Albuquerque, was the general contractor. This is the largest and most advanced tennis facility in the southwest. The Center will be home to men's and women's varsity teams which are expected to join intercollegiate tennis competition this coming year.

Also, major dorm remodeling took place this past year. Kennedy Hall was upgraded to the tune of two million dollars resulting in a marvelous new residence for 86 second year students, featuring computer study and lounge areas, comfortable living room, large furnished individual rooms and modern restrooms. Klinger Construction was also the contractor on this project. The original architect of the building in 1963, Phillippe Register was the

architect for the remodeling project to bring it all up to date.

*The following report from Utah was left out of some of the newsletters. Sorry to those who did not get this section.*

### **Utah Report**

During the Banquet held in Banff Canada, site of this year's RMA conference I was awarded the H. Val Petersen Award for "Outstanding Authorship in support of Rocky Mountain Views." Even though I was unable to attend due to severe budget short falls the award is something I very much appreciate. Val Petersen has always had the wit and the insight to give the newsletter meaning and direction and I appreciate the opportunity to represent Utah.

To all of those who have supported your institutions with articles and information for others to share I extend to you a hearty "Thank you."

Brian Nielson  
University of Utah



### **Capital Construction at the University of Utah**

All indicators, both at the local level as well as the national are that the economy is weak. Most industries are suffering, including the construction industry. We are proud to say that we are doing our bit to help the economy. At this moment, we have approximately \$430 million in projects somewhere along the status line from programming to final construction. As one would expect, only a small portion of that is state funded. The bulk of all this construction is or will be funded through the sale of bonds, and/or from foundations, and/or private donors.

The majority of this activity is concentrated on the east portion of our campus, being driven by growth in the Health Sciences arena. We're constructing a hospital expansion, and a second phase to the Huntsman Cancer Institute. We're starting to design Moran II (an ophthalmology facility), and the Emma

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Eccles Jones Basic Science building, as well as the Health Sciences Education Building. All of these are well over 100,000 gsf each, and should be completed by 2005.

On main campus, we're just getting out of the gate in designing a complete overhaul of our Marriott Library, a 300,000 gsf facility that is only 33 years old. It has serious seismic as well as infrastructure issues that have raised its priority to a life/safety level. We're also programming expansion needs for the College of Law, the College of Business, the College of Education, and a number of other academic programs.

The Utah Museum of Natural History has received permission to relocate over to Research Park, just south of our main campus. Some of you might know that, for the last 30 years, it has been housed in our old library, the George Thomas building. Unfortunately, that has never been a good fit or good location for their type of program. When completed, this \$60 million project will place a wonderful facility directly south of Red Butte Gardens. The George Thomas Building will then be remodeled for other, yet undetermined, needs.

Other construction projects on campus include the extension of the light rail tracks from the Rice-Eccles Stadium up to Health Sciences, and the construction of an Olympic Legacy Plaza at the south end of the Rice-Eccles Stadium. Neither one of these, strictly speaking, are our projects. Thank goodness.

Finally . . . we're still trying to figure out what we're going to do with the old dorms. Maybe its is time for a good bonfire.



### RMA 50<sup>th</sup> Anniversary Celebration September 17 - 20, 2003

Remember to mark your calendars now for the RMA 50<sup>th</sup> Anniversary Celebration Sept. 17 - 20, 2003 in beautiful Sedona, Arizona.

Plans currently include a trip to one of the 7 wonders of the world, our breathtaking Grand Canyon, and educational sessions on the latest in technology and techniques for Facilities Professionals.

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

See you all soon.



## Editor's Corner

The new year is upon us and all of us are experiencing interesting times due to the fiscal issues in our respective states/provinces. I believe that now is when our association pays dividends. The expertise throughout the region, and even nationally, means that we are not alone when difficult situations require solutions. Use your association to help you when it looks like there is no answer. APPA Net is there and RMA has a website so you can communicate with your peers.

The plans for this year's regional conference in Sedona, AZ are well underway. The conference planning team from Arizona State is working hard to make RMA's golden anniversary a special occasion. The scholarship applications are due by March 14 to Mr. Tommy Moss, Colorado State University. These scholarships are one way your Region helps you with professional development. Please take the time to apply for a scholarship either to the Institute or the Leadership Academy.

Last, I still ask you to consider writing an article for the newsletter. The article can deal with any aspect of facilities management. Feel free to send it directly to me (in Word or WordPerfect) at [psmith@pima.edu](mailto:psmith@pima.edu). The newsletter is only as good as you make it. Thanks to all contributors for this issue. Hopefully, we will get some new contributors for our May newsletter. The articles need to be in my hands no later than May 2, 2003.



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

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

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### **FUTURE MEETINGS**

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