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NUMBER 3

Facilities Manager

The official publication of APPA: The Association of Higher Education Facilities Officers



- **Putting the BAM! in SAM**
- **Raising the Bar with Trades Staffing Guidelines**
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Global Partner in Learning

From the Editor

Steve Glazner

Daigneau Wins Second Rex Dillow Award



For the second time in three years, William A. Daigneau has received APPA's Rex Dillow Award for Outstanding Article in *Facilities Manager*. Bill's article, "Charting the Future: A Research Agenda for APPA," appeared in the January/February 1999 issue of *Facilities Manager*. He joins Harvey Kaiser and Walter Simpson as a two-time recipient of the Rex Dillow Award.

The Rex Dillow Award is an annual recognition of the author of the best article published in *Facilities Manager* magazine during the previous calendar year. Eligible authors are those who are full-time employees of an APPA-member institution, and the award is selected by the Information Services Committee based on a rating scale. The award is named for APPA Member Emeritus Rex Dillow, who contributed much to APPA's publication and education program during his active membership in the association.

For this year's award, there were 15 eligible articles published in 1999. Bill's winning article described the development of APPA's research initiative as part of the Professional Leadership Center and laid out clear guidelines as to why this is important for APPA and how the process might work. Lander Medlin discusses the current state of the research component in her Executive Summary column in this issue. You can read the full text of Bill Daigneau's "Charting

the Future" at the APPA website at http://www.appa.org/resources/Facilities_Manager/990102/article2.html.

Our congratulations to Bill Daigneau for receiving the 2000 Rex Dillow Award for Outstanding Article in *Facilities Manager*.

On another, sadder, note, I want to take this opportunity to thank Val Peterson for his tremendous contributions to *Facilities Manager* these past six years. Many of you know Val as a longtime leader within the Rocky Mountain region; he was at Utah State University and then Arizona State University for many years. Others in APPA may know Val from his service as APPA's President-Elect and President back in the mid-1980s.

But ever since he wrote his first Focus on Management column for *Facilities Manager* in Spring 1994—the topic was "Setting and Achieving Goals"—I've known Val as a wonderful writer and a great person with whom to work. He always met his deadlines well in advance, but more importantly, he wrote articles that touched on the important issues of communication, relationships, customer service, personal and professional quality and integrity, and many more.

Val has just retired from Arizona State University and will now be working as a consultant and spending more time with his family. With this issue of *Facilities Manager*, Val also retires as our Focus on Management columnist. Please be sure to read his article on "Staying Focused." But this won't be the end of Val's writing. APPA is in the process of compiling and editing the best of Val Peterson's columns for a future publication.

In the meantime, thank you, Val, for your many contributions to APPA. As you have said, communication is indeed the key. 📣

Duke Rewarded for Energy Efficiency Improvements

by Bob Friedman, Duke University

Duke University Facilities has recently been recognized by the U.S. Environmental Protection Agency (EPA) for energy performance achievements as part of a voluntary commitment through ENERGY STAR BuildingsSM. Because of progress made to save energy and prevent pollution, Duke University Facilities have been added to a select list of 1999 Honor Society Members. The ENERGY STAR Buildings Partnership promotes energy savings and protection of the environment through

the installation of energy-efficient lighting and building technologies.

To qualify for the 1999 Honor Society Challenge, Duke University Facilities monitored baseline energy data and completed a specified number of technology upgrades. Last year, Duke University Facilities performed upgrades in more than 1.2 million square feet in seven major research and library facilities. Electrical consumption was reduced by almost 10 million kilowatt hours (kWh), steam consumption by over 42 million pounds, and water consumption by over 7 million cubic feet. In appreciation, EPA has sent Duke University Facilities a letter and certificate ap-

plauding our performance. Duke is also recognized on the ENERGY STAR Buildings website at www.epa.gov/buildings (Magna/Summa level only).

Energy generated by burning fossil fuels—such as coal, oil, or natural gas—releases pollutants into the atmosphere, including carbon dioxide, sulfur dioxide, and nitrogen oxides. These pollutants contribute to smog, acid rain, and global climate change. By using energy-efficient technologies that reduce energy use, Duke University Facilities is helping preserve natural resources and clean the air.

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improved energy performance and pleased to be saving money while doing so," noted Tallman Trask III, executive vice president of Duke University. "Recognition through national ENERGY STAR events allows us to prove how far we have progressed from year to year."

The ENERGY STAR Buildings and Green Lights programs have more than 4,400 participants nationwide, including almost 400 school districts and universities. By the close of 1998, education partners alone had invested \$294 million in energy-efficiency upgrades, which return \$1.3 billion in net savings over the life of the investments. Therefore, every dollar schools invest in energy efficiency saves \$4, which can be redirected into additional school services or facilities improvements. For more information on ENERGY STAR Buildings, visit www.epa.gov/buildings.

Virginia Tech Hosts VAPPA

by Kathleen Sampson

More than 200 people attended Virginia APPAs (VAPPA) recent annual educational conference and exhibition in Roanoke, Virginia. The three-day conference, hosted by Virginia Tech, included 23 educational sessions, more than 40 exhibits, and supporting programs which were true to its theme: *Facilities Management Can Be Fun*.

The event began with an afternoon of golf and an evening reception at Hotel Roanoke, where the conference was held. Activities and shopping in the Roanoke area for spouses of attendees were provided during conference hours.

Educational classes enticed conference attendees with such subject titles as: Waste Diversion for Fun and Profit; The Joy of Cooking; University

Dining Facilities that Respond to Student Needs; and Value Engineering in a Nutshell.

Other classes presented training on domestic violence in the workplace, how facilities and financial managers can work together to fight deferred maintenance, storm water management, roofing, and creating employee enthusiasm. One two-hour class included an overview and site tour of the Roanoke Higher Education Center.

The higher education facilities' officers gave the conference high marks. "More than anything, I've enjoyed the educational programs," said Dave Armstrong, assistant vice president for facilities management at Radford University.

Washington & Lee University's associate director of physical plant, Randolph Hare, said the variety of educational sessions made it difficult for him to make selections. "I would choose one, and then decide to go to a concurrent one, and go back and forth until the last minute," he said.

Vendors kept the momentum lively with their displays. "It's good to see so many vendors here to talk about their products," said Ruth Lovelace, director of environmental services at Mary Washington College. Gene Fisher, physical plant director for Shenandoah University, was especially interested in the carpeting and computer desk products shown. "You think you know about something, and someone comes along and shows you something completely new," he said.

The attendance sets a record for VAPPA, with 60 percent more attendees than last year's conference. "Virginia Tech is proud to have hosted this event," said Bill Elvey, Virginia Tech's physical plant director. "I think everyone is pleased about its coordination and success. Now we're looking forward to hosting the SRAPPA conference in the fall of 2001."

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PGMS Announces Green Industry Conference & GIE Trade Show

by Kevin O'Donnell
Villanova University
PGMS & GIE President

Looking for the most effective grounds equipment? Interested in high-quality training sessions for your grounds managers? Looking for ways to improve your grounds maintenance operation?

This year's PGMS conference and Green Industry Expo will offer this and much more! The 89th Annual Conference of the Professional Grounds Management Society, scheduled for November 4-7, 2000 in Indianapolis, Indiana, will offer more than 60 technical and business educational sessions. The conference is held in conjunction with the GIE partners: PGMS, Professional Lawn Care Association of America, and Associated Landscape Contractors of America. Several presentations will prove to be very valuable to the university grounds professional, including:

- Notre Dame University Landscape: Challenges and Solutions
- Avoiding Plant Stress
- Leadership
- Maintaining Native Soil Sports Fields
- Best Maintenance for Old Trees
- Slope Stabilization and Beautification
- Contracting Arborist Services
- Trees for Stressed Areas
- Annuals and Perennials
- Turf Care
- Over 50 Additional Topics!

We have included technical, general management, and motivational sessions to provide the most comprehensive grounds management training available in one meeting. In addition to these "formal" sessions, PGMS will conduct "Business over Breakfast" on three of the mornings during the conference. At these breakfasts registrants meet to discuss subjects of mutual interest in informal roundtables.

Also included in our regularly scheduled activities during the conference will be the annual Green Star Professional Grounds Management Awards & Banquet. This is an excellent opportunity to view the best of the best in professionally maintained landscapes, with a special category for university and college campus landscapes. Your school can still be a part of this awards program; visit the PGMS website at www.pgms.org for entry information and remember the entry deadline is Friday August 4, 2000.

Conference registration includes admission to the largest landscape/grounds maintenance trade show around. With over 90,000 square feet of exhibits, comprising more than 300 exhibitors, you are sure to find the right piece of equipment at the right price. A unique feature of this trade show is the Equipment Demo scheduled for Sunday, November 5. This is an excellent opportunity to "try out" the equipment and make on the spot comparisons between comparable equipment. This year the Equipment Demo will be held at the Indianapolis Speedway, which will surely add a lot of excitement.

The PGMS conference & Green Industry Expo combination is without question the greatest value I get for my budget. The diverse educational opportunities and networking with other grounds management professionals are a great investment of my time. And the trade show always provides me with new ideas on how to operate my landscape maintenance program more efficiently.

For additional information and a registration packet, call PGMS at 800-609-7467 or visit the PGMS website at www.pgms.org. There are substantial registration discounts available for PGMS members and early registrations prior to September 15. In addition, travel discounts are available. We look forward to seeing you in Indianapolis.

In Memoriam

We recognize and honor the following APPA members who have recently passed away.

- **Paul D. Davis, P.E./FASCE**, member emeritus
- **George O. Weber**, past APPA President (1970) and recipient of the 1962 Meritorious Service Award. Served the University of Maryland 1946-1972. Edited APPA's first handbook, *A Basic Manual for Plant Administration*, in 1974.

School Name Updates

The following institutions recently announced new names:

- Graceland College (IA) is now **Graceland University**
- Philadelphia College of Textiles and Science (PA) is now **Philadelphia University**
- SUNY Health Science Center/Brooklyn (NY) is now **SUNY Downstate Medical Center**.
- SUNY Health Science Center/Syracuse (NY) is now **SUNY Upstate Medical Center**.
- Tulane University School of Medicine (LA) is now **Tulane University Health Science Center**.

Free National Safety Council Catalog Available

The National Safety Council's Summer 2000 product and services catalog is available free of charge. This full-color, 88-page calendar features the council's newest and most-requested safety and health training programs, reference manuals and publications, periodicals, newsletter, posters, booklets, videos, software, and more.

The National Safety Council is a not-for-profit, nongovernmental, international, public service organization that serves more than 35,000 member organizations and individuals. 🏠

President's Report

by Maggie Kinnaman

[Ed. Note: The following reports are from APPA's 1999-00 officers for activities and services provided this past year. The officers are listed by their 1999-00 titles.]

First, I would like to thank the members, Board, committees, task forces, regions, business partners, international partners and APPA staff for such a successful year. The accomplishments were targeted, the support incredible, and the friendships invaluable. This truly was a year of renewal and growth, and I hope that all of you are as proud of the results as I am.

As they say, time flies when you're having fun, and the past 13 months have been very much like a movie being played in fast forward. My roles as APPA President and Chair of the Strategic Assessment Model Task Force have taken me on many journeys and given me numerous opportunities to be influenced. Our association is well respected among other higher education associations and has a reputation for creating some cutting edge resources, tools, and opportunities. ACUTA, ACUHO-I, and NACUBO, just to name a few, are interested in our Professional Leadership Academy, and SCUP members have inquired about our Strategic Assessment Model.

So how about you? Are you fully embracing your APPA membership? Have you taken advantage of APPA's Facilities Management Evaluation Program to help identify opportunities for future organizational growth? Have you applied APPA's Strategic Assessment Model and started down the road to self improvement? Have you sharpened your saw by attending either the APPA Institute or Leadership

Academy? Have you completed an APPA research application to add to the body of credible knowledge within the facilities profession? What's stopping you? Is it that you don't have enough time? But is that the real reason?

It has been my experience that life is a series of educational processes: learn, master, and do it all over again. We would all like some assurances that, after obtaining this certificate or that degree, we've arrived and our learning is over. But as we know, the world keeps changing and the body of knowledge continues to expand. We need to keep our antennae tuned to new ideas and concepts and embrace learning opportunities. Discovery can either be exhilarating or fearful; the choice is yours. Perhaps the poet Dylan Thomas describes the dilemma best: "Ears in this island hear the wind pass like a fire. Eyes in this island see ships anchor off the bay. Shall I run to the ships with the wind in my hair, or stay till the day I die and welcome no sailor? Ships, hold you poison or grapes?"

RENEWAL

"We cannot become who we need to be by remaining who we are. Invent yourself everyday."

— Unknown author

During last year's annual meeting, the APPA Board kicked off a review of APPA's four-year-old Association Strategic Plan. Some may ask, "Why is strategic planning important anyway?" Remember the old adage that if you don't know where you're going, any road will get you there? Strategic planning provides us with a road in a sea of freeways. It helps focus our scarce resources so that we

are able to make progress toward our future vision.

Association strategic planning is much like planning within the facilities profession. We really need to understand where our customers are going before we're able to do much justice to our planning effort. In this vein it is necessary for APPA to stay focused on the future of the facilities profession. We have identified some major forces that will impact higher education and in turn the facilities profession. These include information technology, resource scarcity, societal needs/public accountability, governmental intervention, and environmental deterioration. Not to be dismissed are future projections of a growth industry status for higher education. In response, facilities professionals must embrace new roles such as information technologist, operations expert, asset manager, partner, strategist, executive, and leader.

In looking at APPA's Strategic Plan, the board agreed that the vision, "Becoming a Global Partner in Learning," and our mission, "To support educational excellence with quality leadership and professional management through education, research, and recognition," are still sound and inspirational. It was the objectives and strategic initiatives that needed an update. After many drafts, the board identified three desired outcomes of the Strategic Plan. They are **competency**, **collaborative relationships**, and **credibility**. Goals have been developed for each desired outcome and vice presidents will develop Annual Action Plans that capture the education, research, and recognition elements necessary to

achieve these goals, and in turn the desired outcomes.

Renewal was also the focus of the three APPA vice presidents and secretary-treasurer. Professional Affairs and Awards and Recognition looked at the Facilities Management Evaluation Program and the Award for Excellence in Facilities Management. Both programs have been revised to incorporate concepts from the Baldrige Award and APPA's Strategic Assessment Model. The Educational Programs Committee looked at the annual meeting and the Institute and incorporated many changes. Significant changes have also been made in the Leadership Academy, now making it more affordable and accessible. Information Services has completely revamped the CCAS survey and continues to do so for next year. Our secretary-treasurer has worked on membership issues, updated the Membership Directory, and continues to develop new strategies to retain

and grow our ranks. As an example, APPA rose to the challenge presented at last year's SRAPPA meeting. Regional and International APPA have offered those Historically Black Colleges and Universities who are not APPA members a complimentary membership for one year. In order for APPA to be the Association of Choice, we must ensure that we are meeting the needs of various constituency groups.

APPA's strategic alliances are extremely important to the success of our association. In today's world, we cannot provide everything for all of our members and, therefore, we must leverage our scarce resources by entering into strategic alliances with business partners and other associations. Currently we have five formal strategic alliances: U.S. DOE/Rebuild America, CSI, CMD Group, ACUHO-I, and PGMS. An Emergent Building Technologies Conference started as an idea and now is a reality,

sponsored by APPA, CSI, and NSCA. This workshop will be held next February in Las Vegas, Nevada.

APPA's participation in the Council of Higher Education Management Associations (CHEMA) epitomizes the concepts of collaborative relationships. Twice each year, 34 member associations send their elected officers and chief staff person to a workshop for the purpose of experience exchange and problem solving. The initiatives that APPA has developed are viewed as cutting edge by other higher education associations. We have an incredible reputation, and I'm proud to report that APPA is highly regarded within the realm of higher education associations.

I found the CHEMA organization to be an incredible collection of resources for APPA. How better to impact the direction of higher education than to partner with other associations around a common challenge. Think for a minute of the deferred maintenance/facilities renewal issue. Couldn't our case be strengthened if we partnered with the housing, business, and planning folks? I think the potential within this group is tremendous for our association and for higher education.

GROWTH

"The people who get on in this world are the people who get up and look for the circumstances they want and if they can't find them, make them."

— George Bernard Shaw

I'd like to talk a little bit about the exciting work of our APPA task forces. First, what are they? APPA task forces are established by the President for short-term objectives of limited scope. Membership is determined by the expertise that can be brought to the table and not tied to regional representation. During this past year, six task forces have been hard at work. These include K-12, College, Leadership, Strategic Assessment Model, Trades Staffing

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EOE

Guidelines, and Grounds Staffing Guidelines. In the context of our desired outcomes from our Strategic Plan, all of our task forces are contributing to all three desired outcomes for our members: competency, collaborative relationships, and credibility.

In addition, as we discussed earlier, an association is in business to support its members through the provision of education, research, and recognition. I contend that APPA Task Forces, certainly the ones in existence today, represent research efforts.

The first two task forces represent constituency groups within APPA. The K-12 and College task forces are identifying strategies that can transform existing APPA resources/tools in such a way that they will address the needs of the particular constituency groups. The work of these task forces is scheduled for completion in July 2001.

The last two task forces, Trades and Grounds Staffing Guidelines, were charged with developing publications that address tasks, frequencies, staffing, and levels of service categories.

The Professional Leadership Center consists of three components: Leadership Academy, research initiatives, and recognition as an APPA Fellow. This year, we saw the rollout of the research component and a redesign of the Leadership Academy. What can be more important to our profession than expanding our information and understanding of leadership? That's exactly what research does.

With the tremendous support of the APPA Board, the Strategic Assessment Model Task Force met five times over the past year: renewing the model, conducting a survey, and identifying the components of a new publication that should be available to members in late fall 2000. Please take a look at the resultant model at

www.appa.org/sam. Let me share with you the essence of SAM:

The APPA Strategic Assessment Model, referred to as SAM, is an essential tool that can be used to achieve organizational excellence through continuous improvement. SAM enables the facilities professional to assess an organization's financial performance, the effectiveness of its primary processes, the readiness of its employees to embrace the challenges of the future, and its ability to delight customers. The facilities professional can utilize the model for self-improvement, peer comparison, or benchmarking. Think of SAM as a vehicle that takes you on a journey from today's realities to future excellence.

IN CLOSING

The 16 trips I have taken this past year collectively have given me a wonderful perspective and appreciation of our association. It is obvious that we have many loyal and dedicated members, supportive regions, and a staff that is hard working, responsive, and active. I want to thank each of you for supporting APPA's efforts this past year and want you to know that it has truly been an honor to serve this association. The experience will be one that I will treasure for a lifetime.

Immediate Past President's Report

L. Joe Spoonemore

As APPA's first missionary I am pleased to report that I have survived almost a year in the wilds of the Arabian sub-continent. Furthermore, I am pleased to inform the membership that I have made a grand total of three converts. This may appear to be small potatoes but when you consider the distances between institutions and the endemic culture this isn't a bad start. The oldest institution of higher education in

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the region is a scant 20-years-old and the newest, mine, will be two years old this fall. The average age for postsecondary facilities is no more than eight years. So what, you ask? Well, for one thing, there is very little regional history for the facilities managers to refer to when it comes to performance indicators, and the labor rates are so low that comparisons with offshore peers have negligible relevance. Another issue that is so huge in most of the world's higher education community, deferred maintenance, is simply a non-issue when your buildings are almost all new, it never rains or freezes, construction is almost exclusively of concrete, and you have stone cladding with marble floors.

Where does APPA come in then? Fortunately, APPA is not totally unknown in this part of the world because a higher education neighbor,

Amr Abdel Azim is the director of physical plant at the University of Sharjah and is a protégé of one of our APPA icons, one Ron Flinn. Another individual with U.S. ties and who is familiar with APPA is Ibrahim Shehady, director of physical plant at the American University of Sharjah. Hopefully we can mitigate one of the major challenges here—the relative geographical isolation from other English-speaking members of the higher education community.

Thankfully, our university is English-language based, the general population is reasonably conversant in English, and the UAE is remarkably involved in use of all forms of cyber-networking systems. This means that APPA is particularly well positioned to learn from the ground-up development of the university network here and in turn to offer invaluable problem-solving

information. To give you some idea of the level of technology that is being incorporated, every single student at Zayed University must have a laptop computer with them throughout the day, and every single classroom is equipped with network access for every single student. Yes, APPA association will be absolutely invaluable for my peers here, and I will do my best to promote their affiliation.

As is well known by those that I have conversed with over this past year, I have been feeling very guilty regarding my almost inexcusable lack of participation in the association. My guilt is somewhat assuaged in that as I monitor APPA's activities from almost exactly half-way around the world I note that all the critical corporate success indicators are all still in the "green." The unusually

Continued on page 12

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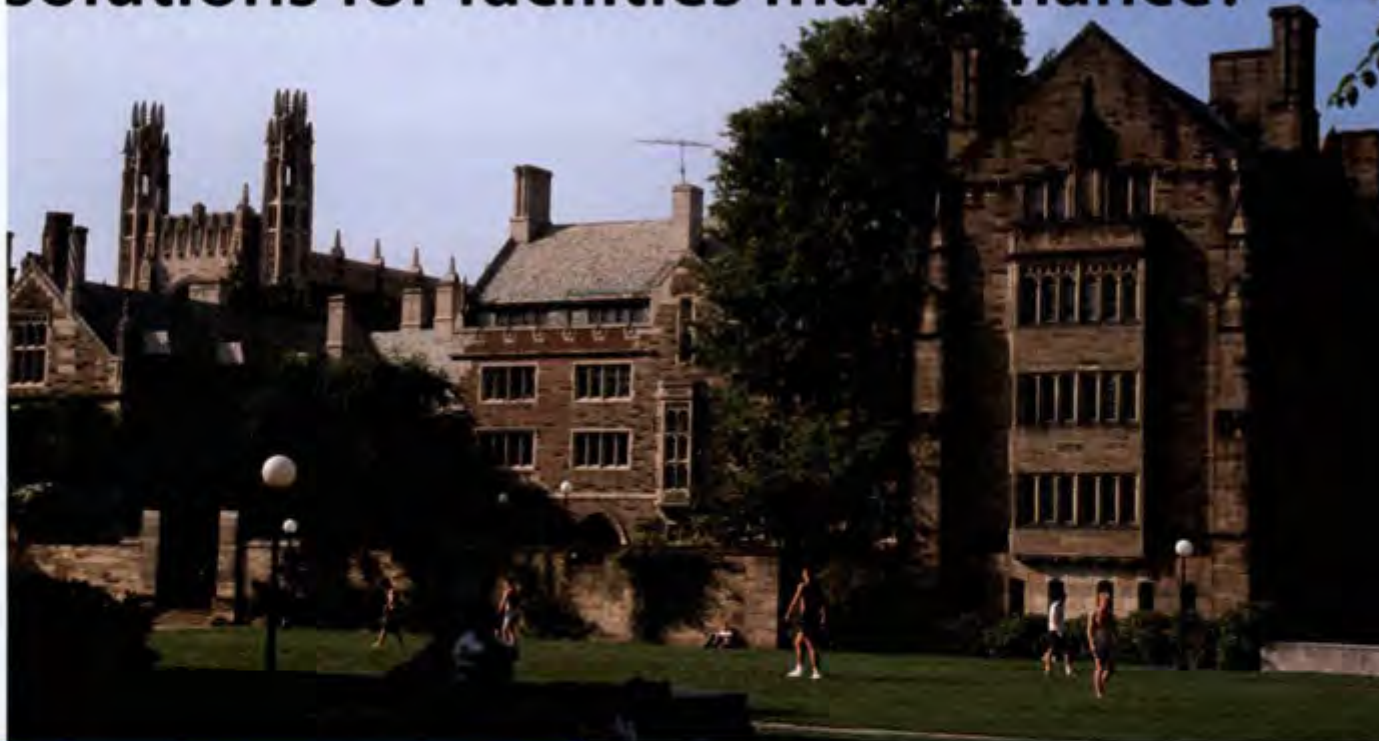
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capable, dedicated, and productive officers that I left to watch the farm are performing at the "outstanding" level just as predicted. The budget continues to afford contributions to our mandated reserve, and our task force productivity is as forecast. I am very pleased with the progress of the College, K-12, Grounds Staffing, SAM, and the Trades Guidelines task forces. I am convinced that these efforts are right on target and that our members will eagerly receive the outcomes. I am especially pleased with involvement of such distinguished associations as PGMS, NRPA, and APWA in the Grounds effort.

I strongly support the proposal brought forth by Gary Reynolds in his White Paper of March 17, 2000. Using our four "core competencies" as a framework for a "gap analysis" and then using this outcome as research topics for the capstone element of our Leadership Academy is a terrific idea. Again, this is simply another expectation from Gary.

I am sincerely thankful for the opportunity to have been trusted to help carry the APPA flag for these past years and I look forward to participating at a somewhat reduced level for the foreseeable future. I am proud of my association with APPA, I am proud to have worked with all of the unselfish members who have chosen to participate in the administration, and I am proud of the tireless Alexandria staff that keeps us on track. I will continue to introduce the benefits of membership to international peers and I will never hesitate to respond to inquiries or consult with our members as the need arises.

My list of thank yous could go on for some time, but I really must say thanks to a special individual—Mr. Pieter J. van der Have. Pete stepped forward without hesitation to dispatch my duties this past year

when, in fact, his responsibilities at his home campus are at an absolute fever pitch. Thanks again, Pete!

One final word to all of those who were concerned about the forecast disaster associated with Y2K—I told you so! Finally, I look forward to reconnecting and the fellowship at the annual meeting.

President Elect's Report

John P. Harrod Jr.

This past year has been filled with wonderful experiences, new challenges, and great opportunities, starting with a visit to the AAPPA Region meeting in New Zealand and closing with attendance at the state of Georgia APPA meeting and the meeting of the Council of Higher Education Management Associations (CHEMA). As an association of higher education facilities officers, we can take great pride in the fact that we are truly a "grass roots" / "international" association. Our colleagues from across the street and around the world are all so very willing to share their knowledge and experience. We must take advantage of these great resources so we may grow both personally and professionally. Each and every one of us must reach out and expand our network of acquaintances.

APPA continues to assess and address the challenges of our profession. Our recently completed Strategic Plan provides an excellent "road map" for our collective energies and activities. Our destinations: "Competency," "Collaborative Relationships," and "Credibility" all lead toward our Vision: "To become a Global Partner in Learning."

I often think of Will Rogers' statement: "Even if you are on the right track, if you just sit there, you will get run over." We are on the right track! To realize our Vision, we must keep moving. APPA elected officers and

representatives, appointed members, Business and Strategic Alliance Partners and APPA staff have been asked to identify how their current and future efforts will contribute to the realization of our Vision. During the coming year, my hope is that we are able to identify specific tasks and begin working towards their completion. Our reporting efforts should reflect our goals, actions, and accomplishments.

Our members and our institutions have made and continue to make a significant investment in our association. Their expectations are high, and our challenge is to exceed those expectations. Having a knowledgeable, "customer friendly" staff is critical. Recent changes in personnel at the office have created challenges and opportunities for responsibility realignment. A renewed focus on member services is occurring. We must continue to evaluate our physical facility to be sure that it contributes to our Vision, that it supports the staff needs, and that it provides a secure financial investment for our association.

APPA is recognized for its contributions in the education, publication, and leadership arena. Business Partners, CHEMA members, and Strategic Alliance Partners want us to be a part of "the Team." The success of our association comes from the individual efforts of our members. We must recognize and acknowledge their contributions while engaging the involvement of more of our members.

As those distinguished presidents before her, President Kinnaman's report has highlighted many of APPA's accomplishments during the past year. We can and should be proud of our association and its continued success. Let us not break our tradition!

Secretary-Treasurer's Report Philip L. Cox

APPA enjoyed another very successful fiscal year, which ended March 31, 2000. The first graph depicts the revenues and expenses of our association over the past six years. By closing out the fiscal year with a net surplus of

\$314,000, we were able to add to our reserves, which is in keeping with our strategy to build capital and operating reserves of liquid assets equivalent to 35 percent of our operating budget. This targeted level of reserves is considered prudent practice in the field of professional association management. As of the end of this fiscal year, we achieved

about 33 percent of the reserve goal, thanks to our financial success over the past few years. Financial stability enables the association to continue its effort to further the profession's growth and development. (See Graph 1.)

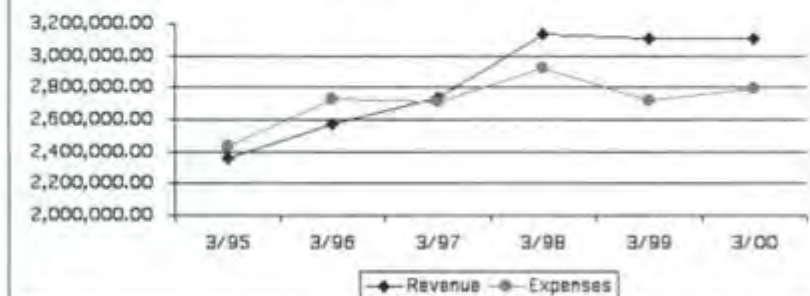
Alertness by the APPA staff to the fluctuations in mortgage rates allowed us to refinance our headquarters building in Alexandria and receive optimum terms. Our 30-year mortgage was refinanced during the fiscal year at a low fixed-rate of 7.4 percent over a 15-year term. This refinancing will save us over one million dollars by the time we retire our mortgage.

The second graph shows the sources of our revenues over the past year. Membership dues represent about one third of our annual revenue. You will also notice that the bulk of the rest of our revenues are derived from attendance at institutes, seminars, and annual meetings, and from the sale of our publications. These income sources are supported mainly by our membership. Thus, almost the entire income of our association relies on a strong membership base. Recognizing this, over the past fiscal year the Board of Directors established additional standing support for the Membership Committee to meet at mid-year and pursue their mission of sustaining and expanding our membership base.

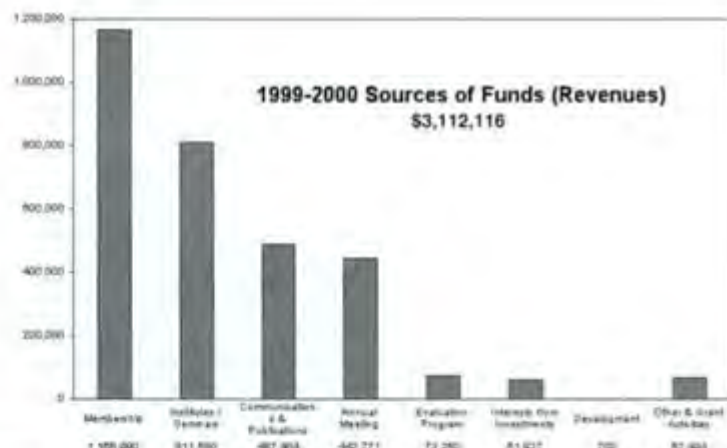
The third graph indicates how funds are utilized by our association. Since our mission is to support educational excellence with quality leadership and professional management through education, research, and recognition, it is not surprising that the bulk of our spending is for institutes and seminars, membership services, the annual meeting, and communications (publications). Also, the favorable financial climate over the past year has made it possible to provide support in expanding

Continued on page 15

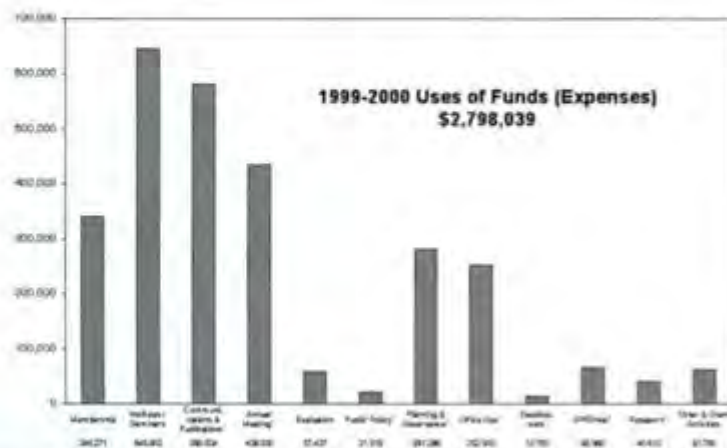
APPA's History of Revenue & Expenses



1999-2000 Sources of Funds (Revenues)
\$3,112,116



1999-2000 Uses of Funds (Expenses)
\$2,798,039



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Continued from page 13

our services for the Professional Leadership Center, continuing work of the K-12 task force, the Strategic Assessment Model, and the trades and grounds staffing guidelines—to name just a few. Likewise major enhancements to APPANet have increased the availability of services to our membership.

Vice President for Educational Programs

Gary L. Reynolds

Annual Meeting

The 2000 Educational Conference & 87th Annual Meeting was held in Fort Worth, Texas on July 16-18, 2000 with the theme "Spurring Change." The 2001 Annual Meeting will be held in Montreal, Quebec, Canada on July 22-24 with the theme "Moving Beyond Boundaries." The normal regional rotation

would put the 2002 Annual Meeting in the Rocky Mountain region, and that region has tentatively recommended Denver as its first choice. However, staff is having difficulty finding space in Denver on dates that are acceptable so we have had to move to the alternate site of Phoenix. For 2003 the committee is considering a co-located meeting with NACUBO at Opryland in Nashville, TN and for 2004 the Marriott Wardman Park (located near the National Zoo and the Woodley Park Metro station) in Washington, D.C. We are still pursuing co-locating with NACUBO and SCUP in 2006 in Hawaii.

Facilities Management Institute

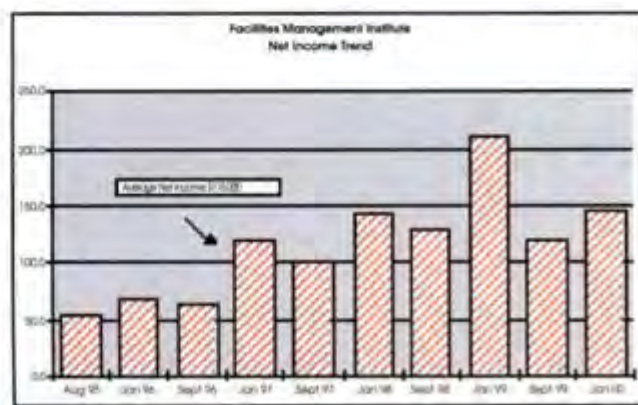
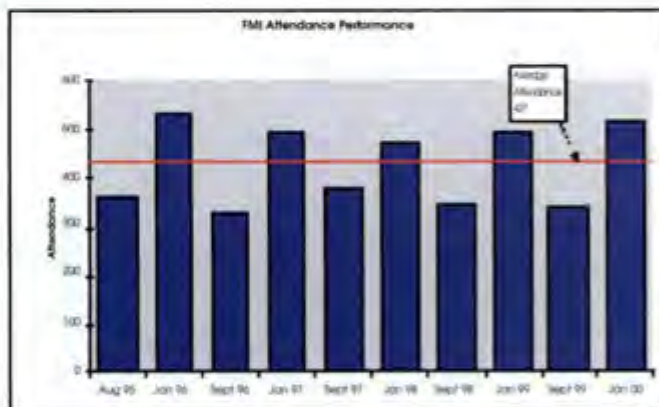
The Institute continues to enjoy great success. The September 1999 Institute in Montreal was well

attended with 338 participants. The program was also financially successful. It was held at the same hotel we will be using for the 2001 Annual Meeting so we had a good "dry run." The January 2000 Institute was held in San Antonio, Texas and we nearly set a new record for attendance. While we were trying to limit the January Institute to 480, we ended up with 518. This occurred in part because of the highly successful Internet registration process. When the Institute registration went online we had over one hundred registrations in the first week. By the time the printed registration went out we were almost full. Also, we changed the daily schedule for the Institute as it now runs starting on Sunday and ends with the banquet on Thursday night. Preliminary comments from attendees indicated that this change is being well-received. The graphs outline the Institute's attendance and financial performance.

Future Institutes are scheduled for Pittsburgh, Pennsylvania from September 17-21, 2000; Newport Beach, California for January 28 to February 1, 2001; Scottsdale, Arizona for September 16-20, 2001; and Tampa, Florida for January 13-19, 2002.

Leadership Program

In my last report I cited concerns about the viability of the program and that we were making substantial changes to increase its likelihood of success. We have combined all three programs into one Academy offered at the same time at one site. This change has allowed us to lower the cost and increase the quality of the program with attendees at all three tracks able to meet and interact. This will allow the same type of camaraderie to develop that we see at the Institute. Also, as research and recognition are a part of this program we will be able to promote collaborative endeavors that will benefit both the individual and APPA. I am



pleased to report that the June 4-9, 2000 program at Rancho Mirage, California was very successful with approximately 100 attendees. It was extremely well-received and I look forward to this program realizing its full potential of 120 attendees in the very near future. The next two Leadership Academies will be in Ft. Lauderdale, Florida from June 17-21, 2001 and Scottsdale, Arizona from June 10-14, 2002.

Action Plans

The action plans developed under the leadership of President Kinnaman remain the same as reported in February. It is anticipated that the 2000-2001 Education Committee will be reviewing and developing new plans for the upcoming year. The current plans are repeated below:

1. Continue to review and refine the Institute for Facilities Management.
2. Offer the newly re-designed one week/multi-track Leadership Academy in the spring at a reduced cost.
3. Expand the promotion of and improve the Call for Papers for the Annual Meeting to increase the number of abstracts submitted by institutional members.
4. Implement the "Regional Best Paper" Award and a separate track for presentation of the best papers at the Annual Meeting.
5. Continue the transition of the Annual Meeting educational focus on strategic issues and include a number of high quality invited speakers.
6. Review membership surveys, conduct surveys of the membership, consult with APPA's regional staff representatives, and adjust educational programs as needed.
7. Market the Leadership Academy and work with NACUBO, CHEMA, Business Partners, and other partners to create mutually beneficial programs.

8. Create and implement a program that actively adds speakers to the speakers bureau.
9. Promote all three leadership programs as part of the "Fellows" designation.

Summary

I continue to believe that the annual meeting can be a significant financial asset to APPA when it is properly located and formatted to meet our members needs, not only educationally but socially. The Institute continues to perform above and beyond expectations, and the Leadership Academy seems poised to finally meet its full potential.

Finally, let me extend my sincerest gratitude for the opportunity to serve as APPA's Vice President of Education for the past four years. It has truly been one of the highlights of my professional career. I know that I leave it in good hands.

Vice President for Information Services

Joseph D. Rubertone

I am pleased to offer the following report on the activities of the Information Services Committee for the past year. I wish to thank the entire committee for their enthusiasm, responsiveness, and commitment to our goals and projects. The committee included Joseph Lalley, Cornell University (ERAPPA); C.R. Lyons, Florida Gulf Coast University (SRAPPA); Thomas Dale, University of St. Thomas (MAPPA); Vicki DeWitt, Kansas State University (CAPP); Mark Shively, University of Wyoming (RMA); Dennis L. Swartzell, University of Nevada/Las Vegas (PCAPP); and Neville Thiele, University of South Australia (AAPPA).

1997-98 Comparative Costs and Staffing Survey

The completely reformatted Comparative Costs and Staffing Survey was made available to the membership in early summer 1999 with a return date of late August. The relatively low response rate disappointed the committee somewhat; it was significantly lower than previous surveys. In an effort to increase participation, the committee delayed publication of the final report. The APPA staff commissioned a telephone survey to elicit additional participation as well as ascertain reasons why members had not taken part. The responses ranged from poor timing of the survey release to concern about the length of the survey and the time commitment required to complete the document. The 1997-98 report was published and released in February 2000 and is available for purchase from the APPA office in book or CD-ROM format. The committee reviewed all of the responses and will again attempt to improve the 1999-2000 document especially in the areas of length and release date. Final decisions were reached when the committee met at the Fort Worth annual meeting.

The committee is scheduled to release the 1999-2000 survey document in October 2000, with results completed by December 2000 and publication by April 2001. This schedule should provide excellent timing for most budget cycles and the information will be as current as possible.

APPANet

The APPANet home page <www.appa.org> continues to be an outstanding and highly utilized resource for our membership. Features added this past year include APPAinfo archival information, an extensive list of sample job descriptions, and the new Membership Directory, which allows members to

update their own membership information.

The Information Services Committee continues to solicit member support and input for building the areas of Success Stories and RFPs/Samples in our four core competency areas: General Administration and Management, Maintenance and Operations, Energy and Utilities, and Planning Design and Construction. Instructions for submitting material is available on the website. Please help!

APPAInfo

APPA's Internet discussion list, called APPAinfo, continues to grow with subscriptions surpassing the 600 mark. Based on personal observation, the service is heavily utilized and quite helpful. Some of you may remember that this service was initiated to replace the International Experience program, which was abandoned in 1997.

Facilities Manager Magazine

Facilities Manager magazine, our flagship publication, continues to be overwhelmingly received by our members and advertisers. I have personally enjoyed the variety and depth of the articles offered, and I continue to receive many positive comments from our members. While our editor, Steve Glazner, deserves the lions share of the praise, I would like to thank all of our members who have taken the time to contribute articles, which are clearly the heart of the publication. We should all be looking forward to future publications!

Books in Process in 2000

Outsourcing Guide

Editor/primary contact: Matt Adams, Adams Consulting Group
Status: Outline in hand, several chapters in draft form, several chapters need authors

Utilities Case Studies/Successful Funding Strategies

Editor/primary contact: Jim Sebesta, Sebesta Blomberg & Associates
Status: case studies have been solicited

Trades Guidelines

Editor/primary contact: Matt Adams, Adams Consulting Group; Ted Weidner, University of Massachusetts/Amherst
Status: Outline developed, authors identified; report planned for Fort Worth annual meeting

Operational Guidelines for Grounds Management

Editor/primary contact: John Feliciani, Winterthur Museum & Gardens
Status: First chapter drafts reviewed and reorganized by task force in Jan. 2000; second/final drafts due Mar. 2000; software component being developed; report planned for Fort Worth annual meeting
Planning/Design/Construction Anthology

Editor/primary contact: TBD
Status: Outline in development
SAM 2nd edition
Editor/primary contact: Maggie Kinnaman, University of Maryland/Baltimore
Status: In development as ongoing SAM Task Force activity; new survey to be conducted in early 2000; report at Fort Worth annual meeting; revised website information and workbook development is ongoing

In Conclusion

On a personal note, this is my final report to the Board and membership as my term as Vice President for Information Services expires at the conclusion of the Fort Worth meeting. I must say I have enjoyed every moment of my involvement with all levels of the APPA organization. I have had an opportunity to establish what I am sure will be many life-long friendships. My thanks to all mem-

bers of the Information Services Committee and to the ERAPPA Regional officers for all their support over the past five years. I could not have done it without them! A special thanks to the entire APPA staff for all the courtesies they have also extended whenever requested.

Finally, congratulations to Vickie DeWitt who will succeed me as Vice President for Information Services. Vickie has served on the committee for the last three years and has contributed greatly to the committee's success. I know the office is in capable and dedicated hands. Good luck and goodbye.

Vice President for Professional Affairs

Jack K. Colby

As the Vice President for Professional Affairs, I am pleased to submit this report on the activities of the Professional Affairs Committee and the Awards and Recognition Committee. These committees have done a significant amount of work to finalize a major overhaul of the FMEP and Award for Excellence programs, select awards recipients for the AFE, the Meritorious Service Award, and the Pacesetter award, as well as improvements to APPA's recognition programs. I am very proud to report their accomplishments for the 1999-00 year.

Professional Affairs Committee

1. Status Report on Evaluation of the Facilities Management Evaluation Program (FMEP)

The PAC committed the majority of its annual meeting in November to the revisions to the criteria and to the processes currently used for the self-evaluation and the team evaluations. The criteria were completely

reworked to include existing topics in a new framework of Baldrige headings. Benchmark criteria were added from "SAM" and from the Baldrige program. Other recommendations from the survey were also incorporated. Progress was reported to the Executive Committee and to the full board in February. Work continues on the criteria language and on specifics of the new format for the self-evaluation and the site team's documentation. Training materials will be developed to assist the site team in their use of the new criteria.

2. Status Report on Evaluation of the Award for Excellence

The PAC will utilize the revised FMEP criteria to revamp this program. A new point-driven evaluation system will be used to select submissions worthy of the award. The majority of the PAC

meeting in November 1999 was devoted to defining the program attributes and the processes for evaluation of the submissions and the selection of award recipients. Award recipients will receive extensive recognition at the national, regional, and institutional levels. The PAC believes that this revamped program will raise the visibility of the Award and will enhance the recognition of Award recipients. Progress was reported to the Executive Committee and the board in February. "Roll-out" of the new Awards format will occur as marketing materials are developed.

3. New Award for "Innovative & Effective Practices"

The updating of the Award for Excellence indicated that APPA did not recognize the ingenuity and creativity of our membership as they go about solving the many problems and challenges that they face each

day. The value of their solutions to other institutions is immense. To recognize these innovations, a new award will be given to the top five submissions each year. The program will be packaged with the new AFE materials and submissions will be evaluated each year for recognition at the annual meeting. The winning submissions may also receive cash awards and further recognition at the national and regional levels.

4. FMEP Activity for 1999-00

The past year was very active with eleven institutions completing or preparing for FMEP visits. The financial performance of the program also improved with a positive contribution to APPA's bottom line above the targeted return on investment.

5. APPA Seat on NEC/NFPA Technical Committee

Mike Anthony at the University of Michigan has been selected to represent APPA on one of the NFPA technical committees. This important accomplishment is due to Mike's interest and persistence over several years. We are very proud of Mike's accomplishment of APPA's behalf and extend to him our congratulations.

6. PAC Role in PLC "APPA Fellow" Process

The role of the PAC in the new APPA Fellow designation being developed as a part of the Professional Leadership Center is under consideration. The PAC will evaluate its role and make recommendations to the board to provide proper governance.

7. Award for Excellence Awards for 1999/00

To date in 1999/00, three institutions have submitted materials for evaluation by the PAC. The submissions by Duke University and the University of Southern California were evaluated and brought to the Board for approval in February. The board approved the recommendation of the PAC to recognize the excellence of the Duke and USC programs by presenting them with the



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award. Recipients of the Awards for Excellence in 1999-00 will be recognized at the Annual Meeting, at their regional meetings, and in the *Facilities Manager* magazine. Special recognition will be provided at the Annual Banquet to showcase these institutions.

The "team" efforts of committee members John Holman, Brian Nielsen, Larry Quick, Phil Garment, Ron Smith, Maurice Matthewson, Chuck Rhode, and Medea Ranck are appreciated for this important task.

Awards and Recognition Committee

1. Review of Awards & Recognition Inventory

The review and updating of the inventory was just completed at the A&RC meeting held on April 14-15. The inventory now includes descriptions of all awards that APPA uses for recognition of its members, business partners, and contributors. Work is beginning on inventory forms for new awards being considered such as the "APPA Fellow" designation.

2. The New "Pacesetter" Award

The new award seems to be well-received by the membership. In 1999, seven nominations were received with seven awards being granted. In 2000, eleven nominations were received with six awards being granted. It is hoped that competition for the award will increase each year.

3. Funding for the Annual Meeting of the A&RC

Following the board action in 1997 to re-establish the A&RC as a standing committee, funding to support a meeting in the spring to select award recipients and conduct the committee's business has been provided on a year-by-year basis. The current funding expired in March 2000. Based on a vote of the A&RC, the VPPA will submit a BPR and Board Action to provide ongoing funding of the annual meeting at the July 2000 Board meeting.

4. Meritorious Service Award and Pacesetter Award

Recommendations for 99/00

Nominations from the regions were received by the April 7 deadline. The nominees were evaluated at the April 14-15 meeting of the A&RC. Eight nominations for MSA and eleven nominations for Pacesetter were received from five regions. The recommendations to the board were voted on by fax ballot in May. Award recipients have been notified and will be recognized at the Annual Meeting Awards Breakfast and Banquet.

5. New Awards Being Evaluated

The A&RC began work on new recognition programs at the April committee meeting. These include the APPA Fellow designation for the PLC, recognition of APPA Institute graduates, and the "Innovative/Effective Practices" award that will be packaged with the Award for Excellence.

6. Award for Excellence

The major overhaul of the Award for Excellence requires that the inventory data for the award be modified also. A significant effort will be made to enhance the prestige of the AFE, APPA's highest institutional award, through higher visibility at the Banquet.

7. Award Nomination Evaluation Process

The A&RC has developed a more structured evaluation process to insure that each nominee is evaluated objectively. The committee will develop a new process to receive the nominations and facilitate distribution of the submissions electronically.

8. NACUBO Higher Education Awards Program

To provide a facilities perspective, APPA continued to provide representation on the NACUBO council that evaluates awards recipients for Management Achievement and Process Improvements. VPPA, Jack Colby replaced Dr. Sam Polk, who rotated off after two years of service.

Executive Vice President's Report

E. Lander Medlin

We have once again achieved significant financial success this past year as demonstrated by our year-end surplus of \$314,000. Maybe even more importantly, we were able to place a greater percentage of this final surplus balance in cash reserves, thereby achieving one-third of our targeted goal in just two short years. It is also important to underscore the fact that this was accomplished in the face of increasing board-approved expenditures to seed-fund some significant new projects and initiatives. Yet, these expenditures were an extremely strategic move on the part of the Board who had a keen eye on improving the facilities profession with new tools, industry guidelines, and strategic information. A reinvestment in the upgrade and improvement of the profession is not only essential, it is imperative given today's rapidly changing workplace.

Further, our educational programs remain strong in both their content and member appeal. The availability and flow of information through APPA's website, listserv, and array of publications is increasing. The connectivity of member services with the needs and expectations of our members is improving in its value and responsiveness. All in all, much has been accomplished. Yet our sights are high; there is so much more to do to keep pace. Therefore, what follows is my status report of some of our most significant accomplishments to date and how our plans are taking shape in the coming year and thereafter.

Since my last update at the February board meeting and to the membership via the EVP column of the March/April issue of the *Facilities Manager* magazine, I am pleased to report that we are continuing to move forward in our effort to impact

the newly revised strategic plan's three desired outcomes of competency, collaborative relationships, and credibility.

In the area of professional competency:

- The Institute for Facilities Management topped the charts with burgeoning enrollments this past January in San Antonio, Texas. Evaluations of the program across all four core tracks (General Administration & Finance; Operations & Maintenance; Planning, Design, & Construction; and Energy & Utilities) continue to be extremely positive.
- The Professional Leadership Center (PLC) Academy's first combined program offering all three tracks (Individual Effectiveness Skills; Organizational Leadership Development; and Professional Development) together under one roof in Palm Springs, California met the mark. Both content delivery and location received high praise. We were blessed with two individuals from Australia who were attending the program not only for their own professional development but also to assess the program's value to their colleagues back home. I am pleased to report they were impressed. Our next step will be to discuss the interest and willingness to formalize its delivery with the Australasian Region (AAPA). Representatives from ACUTA (telecommunications professionals) were officially enrolled in the program to assess the program's applicability to their members as well. Their feedback was enormously

positive. Finally, our colleagues at National Association of College and University Business Officers (NACUBO) are working diligently with us on delivery of a portion of the leadership program as a combined offering to their members next year. These are all important collaborative opportunities as well. In addition, all three components of the PLC (education, research, and recognition) are in place with our three-track academy, research project brochure, and the Fellows status/designation completed. A great deal of appreciation goes to Sodexo Marriott for their generous continued support of the PLC Academy.

- The Comparative Costs and Staffing (CCAS) report for 1997-98 is available in both print and electronic formats. More importantly, the CCAS survey has already been redesigned and streamlined for dissemination this coming fall 2000 with the data/report available in April 2001. This survey will now be provided on an annual basis via the fall/spring cycle for more timely use by member institutions.
- The Strategic Assessment Model (SAM) has been completely redesigned and is available on the website at www.appa.org/sam. A pocket guide and pin highlighting and summarizing the content of a future book (to be published this fall) is available here at the annual meeting. Many thanks to the NALCO Chemical Company for their generous financial support of these tools. In the area of collaborative relationships:
- Our strategic alliances continue to bear fruit as noted below:

- Professional Grounds Management Society (PGMS), American Public Works Association (APWA), National Recreation and Park Association (NRPA), and APPA have completed their work on a grounds staffing guidelines book available this coming fall. Our task force chair, John Feliciani, is presenting a review of their work here at the annual meeting.
- APPA, along with R.S. Means Company (CMD Group), is just a few months away from publishing staffing guidelines for the trades. The co-chairs, Ted Weidner and Matt Adams, are also offering an educational session regarding the task force's work here at the annual meeting.
- Construction Specifications Institute (CSI), National Systems Contractors Association (NSCA), and APPA are co-sponsoring an *Emergent Building Technologies Conference (EBTC)* to be held February 12-13, 2001 in Las Vegas, Nevada. Other endorsing associations are Educause, National Glass Association (NGA), Society of College and University Planning (SCUP), and ACUTA (telecommunications professionals).
- Association of College and University Housing Officers-International (ACUHO-I) and APPA co-facilitated a day-long college workshop at ACUHO-I's Annual Meeting in Pittsburgh on July 7 entitled "Building an Effective Relationship between the Housing and Facility Professional."

- Council of Higher Education Management Associations (CHEMA), of which APPA is a part, co-sponsored an Effective Practices web site (www.chemaffectivepractices.org) and produced a book entitled *Benchmarking for Organizational Change* authored by our own Mo Qayoumi.

In the area of credibility:

- APPA and NACUBO have agreed to co-locate their Annual Meetings in 2003 at the Opryland Hotel in Nashville, Tennessee. This offers both our members an excellent opportunity to increase their understanding of each others' professions and improve communication at the institutional level.
- APPA, NACUBO, and SCUP are laying the groundwork for the co-location of our annual meetings in 2006 in Hawaii. This will be an incredible opportunity to bring together institutional teams across facilities, finance, and planning issues. What a way to build collaboration, more effective working relationships, and increase the level of credibility of all these institutional players within the President's cabinet.
- The CHEMA group co-sponsored a conference for business partners called the Campus/Corporate Partnership Forum (CCPF) to increase dialogue and communication, and build stronger relationships concerning interdisciplinary issues and cross-functional needs and considerations, and to bring resources to bear on such issues as deferred maintenance/renewal, performance accountability and

assessment, and the changing nature and delivery of higher education.

As I mentioned earlier, our newly revised strategic plan is driving the association's time and effort toward the achievement of the three desired outcomes: competency, collaborative relationships, and credibility. As we

make progress toward these outcomes, we will improve our ability to "increase the awareness of the facilities profession with senior institutional officers." We are definitely on our way to achieving that end and ultimately our vision of "becoming a global partner in learning—building your children's future." 🏢



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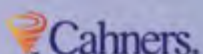
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Executive Summary

A Call for Leadership in Research

by E. Lander Medlin

The central importance of research—as the basis for the renewal of the facilities management profession and the educational enterprise—could not be more clearly articulated than by the following quote from Bill Daigneau's article "Charting the Future: A Research Agenda for APPA." It was published in the January/February 1999 issue of *Facilities Manager* magazine and also just received APPA's most distinguished publication honor, the Rex Dillow Award for Outstanding Article.

We all recognize that the first cornerstone of leadership is to have the will and the ability to lead. The Professional Leadership Center (PLC) Academy... now provides those skills needed to lead. But the second cornerstone is that of research.... The underlying importance of research is the need for any profession to constantly improve itself through innovation. Innovation itself is spurred by knowledge. And knowledge is derived from systematic investigation into the fundamental workings of a system, in our case, higher education and facilities management. The fundamental method of such investigation is research... which hopefully will provide the knowledge on which future innovation and improvement will be based. That is the key not only to the future of higher education, but to our futures as facilities professionals as well.

Lander Medlin is APPA's executive vice president. She can be contacted at lander@appa.org.

And it is research toward an improved body of knowledge for the facilities professional and the educational enterprise whose time has come. Moreover, my premise is that our role as leaders in shaping higher education outcomes is essential and must begin in earnest immediately.

This will require a heavy dose of skill-building, research, and inquiry by us all. The problems we face require our best effort. To continue to function in the traditional supportive



role is no longer valid in this new era. We cannot, we must not, sit back and watch the changing face of higher education unfold. Nor can we wait for the dictation of its direction and, thereby, wait to be told of our new lot in life. Instead, we must actively engage this new era—the information and telecommunications age—at every twist and turn, to effectively shape the future of higher education and correspondingly that of the facilities management profession.

A recent magazine cover captured it for me dramatically: "Just imagine what it would feel like if your job was being totally reshaped right before your eyes... it is!" There is a new paradigm emerging and that new paradigm has a very different look and feel. The look is one of competing demands and expectations, increasing accountability, a market-driven network economy, a customer

relationship focus, a surge of powerful new technologies, globalization, and multiculturalism. The feel is one of sustained speed, heightened urgency, immediacy, impatience, unpredictability, flexibility, and adaptability—a pace that has accelerated to a stunning degree.

Tomorrow is upon us today! So we must seize the day—*carpe diem*—for it is the "power of now." But maybe even more apropos is the T-shirt emblazoned with the words "Carpe Manana"; in other words, Seize Tomorrow, before it seizes you! We need to claim it, embrace it, create it, and change it all at once.

In essence, we must reinvent ourselves and our institutions by researching new information, new ways of thinking, new approaches to doing business, and discovering a new level of understanding and innovation that will fuel the education engine of the future. Innovation holds the key to unlocking the door of opportunity. In his book, *New Rules for a New Economy*, Kevin Kelly provides us a slightly different slant on the power of innovation: "Wealth in the new regime flows directly from innovation, not optimization; that is, wealth is not gained by perfecting the known, but by imperfectly seizing the unknown." From every angle, innovation through research is viewed as the linchpin to improvement of a system and oneself.

To prompt your thinking, I have captured under four broad categories some of the challenges I believe we face and are in need of our attention.

RELEVANCE - How do we maintain and/or remain relevant in an increasingly more competitive environment?

For example, take Dr. Ernest L. Boyer's words from a 1988 Carnegie Commission report: "One cannot be a core of excellence in higher education if you don't demonstrate a commitment to facilities. It is time to recognize that facilities provide the centerpiece around which all other functions in higher education take place."

Will this statement remain valid and relevant in this new era? Do facilities management objectives achieve the objectives of higher education?

NETWORK ECONOMY - What are the most profound implications of the network economy for higher education as an industry and correspondingly the facilities profession?

Take, for example, the travel industry. Travel agents of the future will show customers virtual trips,

letting them see, by computer, their hotel room, restaurants with all their smells, and other local, surrounding community flavor.

Will student learners expect the same thing? Of course, for the technology already exists!

SUSTAINABILITY - Do we need to change the way we do business today? What is the new business model? Even more basic, what is our business in this emerging world?

We don't want to end up like the railroad industry, which built bigger and better railroads decade after decade because that is the business it thought it was in. The reality was that it was in the transportation industry and was quite nearly put out of business by airplanes and trucks.


Are we in the business of maintaining buildings, or are we in the business of creating learning communities?

INNOVATIVE CULTURE - How do we create an organizational culture that attracts and retains "talent" and embraces innovation?

Consider the Bureau of Labor Statistics: "Talent is the scarcest it's been at anytime throughout the working careers of most people who currently hold a job."

We have moved from an emphasis on physical strength to that of intellectual capital. The importance of continuous learning for all does not exclude our responsibility to become more educated and informed. Research will help us do that individually and, in turn, collectively improve the facilities profession.

Finally, the National Center for Higher Education Policy aptly stated: "A nation is better served if its citizenry exercises influence with real understanding—not just feelings—about basic issues." As for us, we must also take responsibility for addressing issues associated with the fine balance of managing the institution's capital assets. We must inform and create a new level of understanding steeped in factual data and information that is valid and viable derived from original research, not based on anecdotal, experiential "gut" feel. The latter carries little weight, credence, or influence in assisting others to formulate reasoned assumptions and conclusions.

I recently saw an advertisement on the Discovery Channel that simply stated: "What we know is so much smaller than what we do not know." Let us seek a greater knowledge base through leadership in research. It's a new era with new rules and new technologies. The good news is we have the opportunity to use these technologies to shape the rules and, therefore, the era. In the famous words of a Spanish philosopher: "If not us, then who; and if not now, then when?" 

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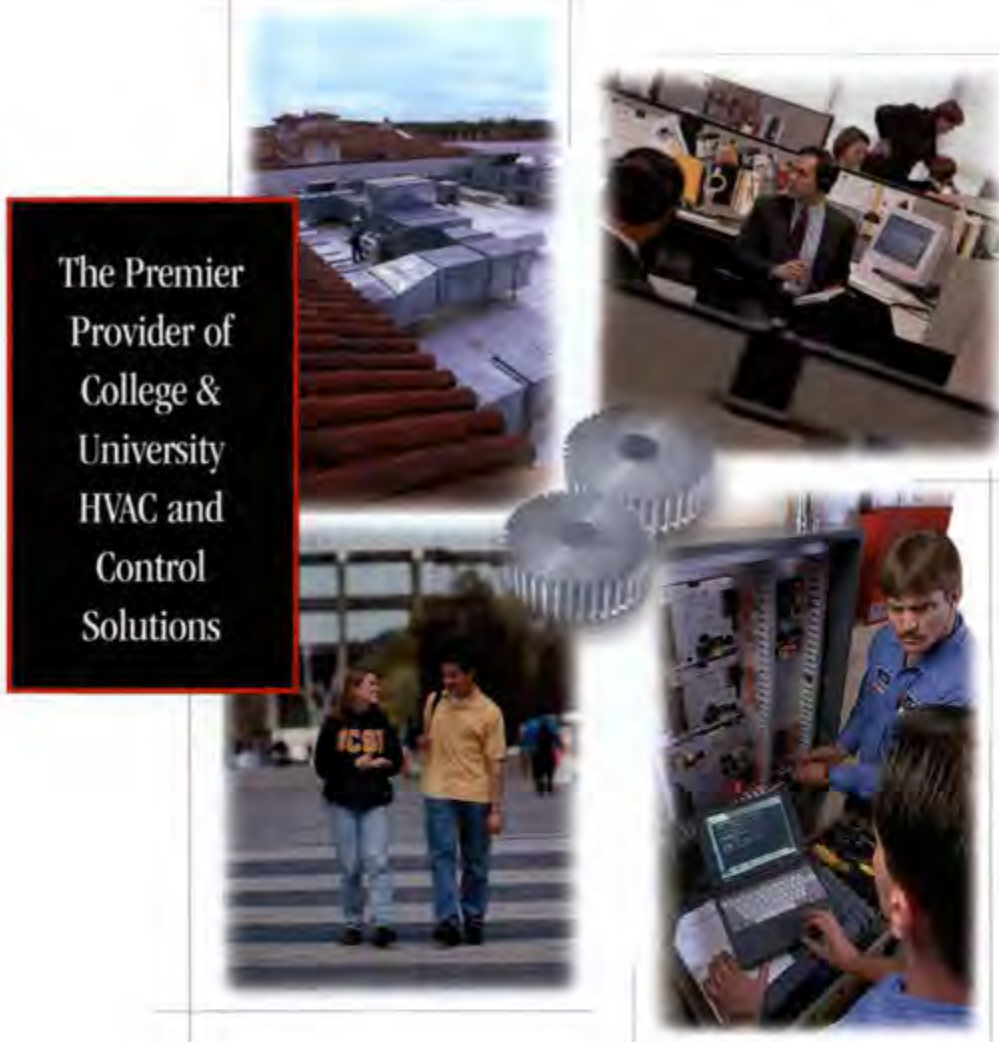


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Staying Focused

by H. Val Peterson

I grew up in a rural area in Idaho at a time when the technology of farming was evolving from an era of hard manual labor to a more mechanized mode of operation. The locality was spotted with small family farms, unlike the mega-tracts found under cultivation today.

Typical to each farm was a pasture—most of which were quite generous in size. One particular pasture in the area was about five acres in size and was the home of a small flock of sheep, guarded by a feisty and seemingly fearless ram.

As youngsters are sometimes want to do, it was not uncommon for those who knew about the ram to dare those who didn't know better to walk across the pasture. The ram, ever protective of the sheep or perhaps just looking for a little action, would chase the intruder and butt them to the ground. Even though many tried, not even the fleet of foot or those adept at broken-field running could avoid getting caught. All were overtaken and knocked down by the ram.

Knowing the ram's disposition, these youngsters should have known better than to send unsuspecting friends (or even those they disliked) into the fray—a very questionable practice. But they did.

Maybe because the pasture provided a shortcut to the only country store for miles around, the deceptive

grass.

The ram, as expected, would take up the chase and, given its superior physical skills, would quickly catch the young men. But the lads, given their superior intellectual skills, would simply toss the bundles of grass to the ground. The ram, given

its inferior reasoning skills, would stop to munch the grass—and the lads would skip off to safety beyond the pasture fence. The unlucky ram never did figure out that he could have had his cake (in this case the luckless torchbearer) and eaten it too (the grass) if he had not lost his initial focus.

A multitude of lessons, of course, can be learned from these encounters. So let's first consider the not-so-friendly ram.

The ram was originally intent on the noble cause of protecting the flock from intruders. But he was all-

too-easily distracted by the lure of an easy meal. He, in short, yielded to satisfying his appetite at the expense of a more noble pursuit.

The lesson here naturally leads to questioning we might ask of ourselves:

- What distracts us from achieving our goals?
- What distractions come along to lessen our enjoyment of life?
- What obstacles keep us from getting rich?
- Simply put, needn't we just maintain our focus on what we want to achieve?



youngsters—ever searching for a shorter route to the source of chocolate candy and soda pop—continually searched for a way to get them safely through the pasture. They operated under the motto: trying times are not the times to stop trying.

Eventually, they discovered something quite extraordinary:

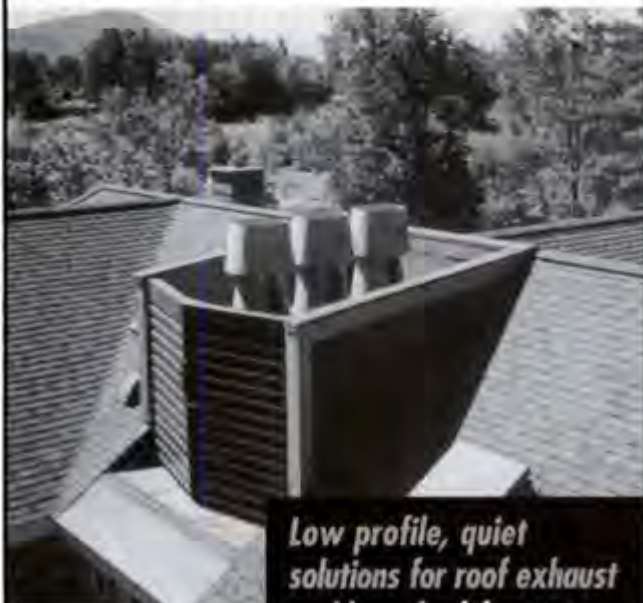
Before entering the pasture, the boys would pick the wild grass from the nearby ditch bank, bunch it together into a large bouquet and hold it high in their hands like an Olympic torch. They they'd run just like an Olympic torch runner—one-by-one

This is Val Peterson's final Focus on Management column for Facilities Manager. He has recently retired from his position as director of facilities management at Arizona State University, Tempe, Arizona, and now plans to relax with his family and work as a consultant. A new anthology of Val's most memorable writings is in the works and will be published by APPA later this year.

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But life, somehow, isn't quite that simple. Obstacles are everywhere.

And while there is no way to avoid many of life's obstacles, all too many of those obstacles are self-imposed—by the choices we make. Just as the ram, we too often trade what we deeply want for something we think we want right now.

Now, let's consider the boys.

The boys, intent on getting those goodies at the country store, would not be distracted by the ram's threats. While, in this particular experience, the goal was certainly trivial, but the example is insightful.

In their first attempts to cross the pasture, the boys were knocked down—and even knocked down again. But sometimes our greatest accomplishments are not achieved in never falling, but in rising every time we fall. Not only did these boys get up and try again, but they also figured out a way to outsmart the enemy. I'm sure that to a degree they did it for excitement, for the thrill of the chase, and for the challenge it posed. The lure of the sweets may have been the initial incentive for their mad dash across the pasture, but outsmarting the ram was also the goal. When the boys first started in their quest to outsmart the ram they had no idea how it could be done. But over time and through the generation of many possible solutions—both good and bad—the desired outcome was finally reached.

For those things we really want out of life, we need to stay focused on the goal and not get distracted by short-term wants. If we do this, just like the boys in this example, our reward will be the goodies (or whatever else) we seek.

You don't have to know how you're going to get there, but you need to know where you want to go. In the case of the boys with the sweet tooth, they knew exactly where they wanted to go. They just had to figure out the best way to get there.

It is crucial to have a crystal clear picture of what you want to accomplish. Just as an out-of-focus lens ruins the photograph, our end result becomes "fuzzy" if we lose our mental focus. One must operate with a sharply defined mental image of the outcome you seek. Rivet your attention on that spot where you are to end up after the exhilarating run "for the gold." Visualize your arrival and the rewards that await. And just as surely as a magnet is attracted to steel, solutions begin to appear and answer come.

If you start worrying too much about getting from here to there, you are bound to bog down in the question about methodology. People always seem to get hung up on the "how to" aspects of getting there. Look at it this way—you're not supposed to be concerned about what happens in the middle of a jump—you're supposed to be thinking about where you're going to land!

Narrow life down to what's valuable and necessary. In a world of complexity, the best weapon is simplicity. So keep it simple—and learn to carry the torch! 🔦



IT TAKES A REVOLUTION – A CASE STUDY OF FACILITIES SERVICE IMPROVEMENTS AT UCSB

By David Gonzales

In early 1996, an APPA Facilities Management Evaluation report of the Facilities Maintenance and Operations department at University of California, Santa Barbara (UCSB) quite simply hammered us. The report codified what most at UCSB believed and experienced regarding the ineffectiveness of our facilities service programs. I came to the facilities department later that year, and the shock waves were still being felt by the campus and most facilities workers. Just recently, for about the third time, my boss, Associate Vice Chancellor Everett Kirkelie, asked me, "Have you given serious thought to writing about what's happened since 1996?" Not until recently was the time right to bring you up to date on the new Physical Facilities department at UCSB. Here's the brief version of a very good facilities story.

David Gonzales is director of physical facilities at the University of California, Santa Barbara. He can be reached at david.gonzales@pf.ucsb.edu.

From the Ground Up

One fascinating thing about UC Santa Barbara is the incredibly beautiful location of the campus—800 acres right on the central coastline of California. But the campus landscape was quite mediocre even on the most favorable spring day. How could that be? Why was the landscape so low on the department's priority list? I won't bore you with budget cut stories, nor will I second-guess my predecessors, but the landscape beauty of UCSB did not match up to its geographic advantages. I remember the grounds guidelines presenters at the 1998 APPA educational conference driving home the critical importance of taking care of the campus grounds. Most everyone knew that campus appearance factors rank highest in the minds of parents deciding upon a university to send their children. To a person like me, having been on the job for barely a year and a half, I had to ponder this point seriously.

When I returned to work after that conference, I got really busy implementing landscape improvements that were frustrating me because I could not get them out of the planning stage. We focused initially on areas near major pedestrian walkways, along major roads, and at each campus entrance. We set goals in the summer of 1998: by the fall quarter, we wanted the campus community to return and notice the improved landscape. We met our goals. We got immediate and positive feedback, mostly via e-mail. For the first time, e-mail became my ally. Good news travels fast too! The campus faculty and staff, visitors, and parents of prospective students told us how much more they were enjoying the beauty of UCSB because of the newly improved landscape. This positive feedback about grounds has continued to this day. Since everyone sees the landscape, everyone "knows" that the facilities department is undertaking very positive, tangible improvements for the campus.

I had no idea how important and sweeping this "positive prejudice" would be. Our building maintenance mechanics continued doing their good work in equipment rooms "behind closed doors," but everyone could see the groundskeepers working their magic to transform appearances overnight, creating more beautiful and enjoyable outdoor areas.

Morale and Productivity

One of the major positive outcomes from our landscape improvements was how our groundskeeping staff became well known in our own department! Having toiled for years in virtual anonymity, now everybody knew the names and work product of our groundskeepers. Let me tell you how it warmed my heart to see our grounds workers carry the reputation of the department and become our legitimate facilities heroes during the initial phases of our revolution. This phenomenon gave all the grounds staff and the rest of the facilities department an injection of morale. We were all being noticed and recognized in a positive way. It was sudden, dramatic, and positive. We had been down for too long, and now the emotional energy of our "comeback" was beginning to show itself. All facilities workers felt a lot better during the summer and fall of '98. Remember that productivity enhancements come only if morale improvements occur first. What was happening in our grounds program was spreading throughout the department. The campus was talking about us in positive terms. We were talking about it internally. For a while, it seemed like our grounds program enhanced the reputation of Facilities with every new planting! We convinced ourselves that we must capitalize on this newly found wave of good will and positive energy.

Service Outreach

I remember Jack Hug of UC San Diego advising me early on about the benefits of keeping facilities workers close to their customers. The customers love to see 'em coming, and throw parties for them when they finish their work, he told

me. In mid-1998, about the same time we were beginning our landscape reinvestments, we implemented a program we call PM PLUS. We organized a team of workers representing all trades who traveled the campus on the same schedule as our preventive maintenance team. We met with our customers ahead of the team's arrival and told them that while we PM'd their building, we'd perform needed general maintenance according to their priority lists! You know what that meant; we painted like there was no tomorrow! From the beginning, PM PLUS was a hit with every customer. Our customers especially appreciated the idea that we would address their top maintenance needs, without them having to call us. The PM PLUS team was a hit internally in facilities, too. Many trades workers and custodians wanted to be on this highly visible team, and many new facilities leaders stepped forward during the first months of our PM PLUS experience. The positive inertia of PM PLUS gave us another morale boost and led us to our next major service outreach effort, establishing comprehensive maintenance zones on campus.

Keep the Work Inside

The 1998 APPA educational conference in San Jose also helped me to decide another critical issue. Should I contract a portion of our campus custodial service? I was on track to do just that until I met the folks from Iowa State. The contingent of custodial workers led by Rick Terrones, president of the AFSCME local, captured me with their gutsy presentation. I spent more time with those turned-on workers that evening when I saw them at the hotel. They convinced me to listen to my own union staff who were dead-set against the contracting option. When I returned to my campus, I put the challenge to our custodial union leadership: work with me to redesign a more competitive, customer centered custodial service, and I'll junk the contracting proposal. We began meeting weekly in September 1998, an equal number of workers and managers with the facilitating presence of a Human Resources mediator. We called ourselves the "custodial redesign team." We've had over 60 meetings since then, some very difficult and contentious, but we're still meeting. Now, our custodial workers have direct input into all aspects of our custodial service program decisions. Their teams and leaders have more authority and accountability. Morale is way up and so too is their attendance and productivity. We have lots of issues on the table continuously, but there is a much greater sense of commitment to be "competitive with the outside" among our custodial workers and team leaders. Contracting is not an option today.

Operating in the Zone

In January 1999, after several months of discussions at all levels in the organization, we divided the campus into four maintenance zones and opened maintenance and operations headquarters in each zone. Our trades workers were directly involved in all the planning, down to the details of what they

needed in their zone offices and which workers would be on their respective teams. All zone teams consist of at least one representative from each trade. We did this right in plain view of our customers, in our equipment space in their buildings. We established computer connections in the zone offices for communications and building automation systems. We began to smother our customers with service, because very often, our workers were just around the corner from the project or the caller. We were right there for them. Without always knowing it, we were beginning to develop our new service strategy. We aligned all major services in the same geographic maintenance zones, so each zone consists of building trades, custodial and grounds teams.

Integrated service programs became our objective. Internally in facilities, the premium was now on coordination, communication and teamwork among the teams in the three major service programs. These awesome words have huge service impacts when they are part of a real action plan! Feedback from our once harsh critics (we affectionately called them "the friends of facilities") now became "thank you" and "wow." We were now doing our signature PM PLUS projects in all four zones simultaneously!

We started including custodial and landscape projects requested by our customers. At this date, we've completed at least three cycles of PM PLUS visits in all major buildings. Predictably, our customer maintenance request lists are getting shorter. We knew we were making real progress when we combined our PM PLUS with quick responses to all trouble calls the day they come in. By mid 1999, we were on a positive, meaningful course that nobody could deny. Our confidence within the department was way up. Our morale was improving. Our sick leave usage was declining. Productivity enhancements were rampant. Our grounds improvements, our custodial redesign, our new zone structure, our visible presence in the buildings, and our timely response to trouble calls were the talk of the campus. We were being asked to present our new organization and service strategies at campus business officer meetings, and our managers and workers received standing applause. What a change! We have great fun telling our customers in large meetings that we now walk tall in their buildings, no longer ducking to avoid their criticism. Facilities at UCSB was reinventing itself and redefining its working culture. And, best of all, our workers and managers were having more fun delivering great service to the campus. Our workers have a greater stake in the departmental decision making.

Teamwork

One of the more exciting aspects of our facilities revolution was our use of work teams in all of our service programs.

This feature alone helped us identify about 20 new "leaders," who carry the banner of organizational change. Once we went to the zone service structure, we organized all our workers on teams within the four campus geographic zones. Each zone had one diverse trade team, two or three custodial teams and one grounds team. This is a manageable sized group for coordination, communications, and planning purposes.

The all-important issue of who would lead each team was resolved in favor of the bargaining unit workers. The workers would be led by one of their own. This allowed us to significantly reduce the number of

supervisors/managers in the department, and provided the

opportunity for previously untested staff to rise to their next level of leadership, commitment, and performance. In other words, the workers' behavior norms would be established in the team setting, led by one of their peers. We were able to upgrade working leads to higher paying positions but still in the bargaining unit. We tasked each working lead to perform and organize the work flow of their team, contact customers, schedule PM PLUS projects, organize the response to daily trouble calls, coordinate with the leads from other services, and resolve everything possible informally within the team setting. We have 13 custodial leads, 9 trades leads, and 5 grounds leads calling the shots on work flow.

Facilities managers are now responsible for supporting and coaching the leads and making all the strategic decisions about our services. So far, we've experienced more success than expected with this model. And, we've opened the door to new careers for 27 highly motivated leads. Just imagine how positive the lead's impact on team workers is in this period of revolutionary change compared to the former supervisory-manager hierarchy.

The Heart of the Issue

Obviously, I'm telling only the good-news stuff. We've had lots of trial and error; we've had to recover when we missed our objective; we've had to move ahead with many inexperienced leaders whose initial leadership training experiences were on the job. But through it all, the constants which came through for us are the heart and will of our facilities staff. Our staff are very good people with high levels of confidence, expertise, and pride in their work. We managers are the lucky ones to be able to unleash this potent force of maintenance experts on the campus, in a redesigned service



structure utilizing a service strategy that really works for us. After reading and studying Leonard L. Berry's *On Great Service*, we figured out how to get the emotion and passion of our facilities staff working for the department, leading the revolution in facilities.

Doing the Hard Work

We started this revolution by meeting with groups of employees in all of our services. We still meet regularly (weekly or biweekly) with representatives of the trades, custodial, and grounds workers. They tell us the truth. We have learned to be better listeners. And when they are right, we decide the issues accordingly. Worker input and involvement has been invaluable and key to the process of change.

Employee empowerment cannot be a buzz word in a major change scenario. We learned the importance of letting the workers decide and implement many improvements. But, providing new authority and responsibility to workers and their leads resulted in new jobs with new compensation requirements. Some of the savings realized when we reduced supervisor numbers has been spent to upgrade salaries of all the leads. But, the morale and productivity gains in facilities put UCSB way ahead on the customer service balance sheet.

Finally, the need to expose these facilities revolutionaries to valuable leadership training, the kind to which we used to

send only managers, becomes critically important. So, we developed a Leadership 2000 series of learning experiences primarily for our Leads, our new leadership forces. We have courses scheduled in writing, cultural communications, training and presentation skills, organizational change, and ethics in Facilities. We are using campus managers, faculty, and consultants as trainers. We started with a memorable day of George B. Wright presenting on leadership and teamwork, and Professor Leonard L. Berry, author of *On Great Service* and *Discovering the Soul of Service* recently visited us.

Revolution is defined as a sudden, radical, or complete change. That says it all at UCSB Facilities these days. So, my facilities colleagues, UCSB is back on track, but not just because I said so. Ask any of our customers.

I must share a personal note on these events. I'll never forget my first days on the job in the facilities department as acting director. On the one hand, having worked at UCSB for 15 years, I knew the major players at all levels in all campus administrative and academic venues. This would prove to be very beneficial. But on the other hand, the facilities workers, all being unionized, knew me only as the Labor Relations Manager—you know, part of the problem from their perspective. "Oh no, not him," I heard often.

You can see that some of my major challenges started on day one, but so too did the excitement of high volume activity and achievement. Soon, I saw the facilities operation as a wonderful mix of significant challenges and meaningful rewards for everyone in the organization. I have concluded that it's the loyalty, expertise, and quality of the facilities staff that has been key to our success. This awesome power of the facilities workers needed to be unleashed on the campus in a way that my predecessors had not. I know they tried.

I thrive at work on the aspects involving the power of the human spirit. Our days are filled with accomplishment, joy, disappointment, frustration, recovery, and strategy. We embrace the emotions of all these experiences each day with more confidence and understanding how the power of our collective energy is working for us now. 📌

Ed. Note: For more information about APPA's Facilities Management Evaluation Program, please visit www.appa.org/fmep or contact Randel Edwards at APPA at 703-684-1446 ext. 234 or randel@appa.org.



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PUTTING THE BAM! IN SAM

Recipes for Performance Excellence



By Tom Harkenrider

Food recipes are learned and prepared in many ways. Some of the best are those that are distinctively seasoned. Emeril Lagasse, celebrity chef on the nationally syndicated Food Network, has a signature method for seasoning his recipes that he refers to as "kicking it up a notch." Emeril takes a pinch of his special seasoning called "essence of Emeril," steps back with his hand raised, and just as though he was making a one handed dunk shot, propels the seasoning at the dish and shouts in unison with the studio audience, "BAM!" The recipe has now been transformed into something special from being "kicked up a notch."

SAM, the APPA Strategic Assessment Model, was developed based on two recipes for organizational performance excellence. They are the equivalent of the "essence of Emeril" and represent in a sense, the "essence of SAM." One of them is

referred to as the "Balanced Scorecard" and the other is the "Baldrige," short for the Malcolm Baldrige National Quality Award. Literally thousands of organizations of all kinds and sizes have adopted these two performance measurement instruments for their continuous quality improvement initiatives. Besides being well recognized and standing the test of time, they have become fairly straightforward and easy to use by both line and leadership staff combined. Most organizations are able to benefit from using the information provided by both instruments for self-assessment, which is one of the primary objectives of SAM. This article will, therefore, present case studies about some organizations that have been successfully seasoning their organizations with this "essence of SAM" and kicking their organizational performance "up a notch."

Although the APPA SAM book and recent *Facilities Manager* articles offer ample reference material about Baldrige and Balanced Scorecard, it is important to keep in mind two things. The first is that both models describe the relative levels of organizational performance as a holistic system; all ingredients of the recipe interact with each other. This means that the elements of the models are linked and have an effect on the other elements. For example, financial measures can

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relate to customer and employee satisfaction indicators, process improvements can influence financial indicators, employee satisfaction can influence customer satisfaction, leadership systems can influence all of the above, and so on. The second is that each organization is responsible for deciding what is important and what is not; the models are non-prescriptive guidelines; the organization is as individual as any "chef." For example, the relative focus on safety training and near-miss accident tracking for the service desk personnel would not be as relevant as for the crafts and trades staff. Some organizational ingredients require more "seasoning" than others depending on the "chef" and "cooking conditions."

A chapter in the first edition of the SAM book, "More than a Feeling," made mention of several organizations that were using the essence of SAM. They included the University of Southern California, Emory University, and Soka University of America. Chapters were also authored by individuals such as Jack Hug and Mohammad Qayoumi who were pioneers in the application of performance assessment models offering the University of California, San Diego as a case study for Balanced Scorecard. The following are some additional case studies as they apply to the Baldrige including APPA's movement to include a Baldrige format from SAM in the Excellence Award and Facilities Management Evaluation Programs.

University of Southern California

When Dr. Thomas Moran, vice president for business affairs, launched his Baldrige based quality improvement initiative in 1996, he probably had no idea about the significance of being a pioneer in that area, nor the eventual influence that program would have on campus community and the facility management organization. One of his first accomplishments was completing a copy of the Baldrige Award application referred to as the "Eureka Award" administered by the California Council for Quality and Service (CCQS). The complete application form is posted on the web page <http://ccqs.ccqs.com>. Dr. Moran ultimately accepted a Best in Class award recognition for that effort in 1997.

The greater value from this effort came in the form of a *feedback report* that a team of well trained CCQS examiners provided as a result of scoring the application against criteria similar to the five levels of organizational growth outlined in the SAM matrix. The feedback report contained comments about strengths and opportunities for improvement in each of the seven categories shown on in Figure 1. In addition to receiving a feedback report, he was also requested to open his doors to other award recipients and high performance organi-

zations for a "Best Practices" site visit. His Division of Business Affairs was now on the "radar screen" in the high performance organizational circles.

Maurice Hollman, associate vice president for facilities management services, also recognized the value of incorporating the Baldrige into his own quality improvement programs. APPA had developed the Strategic Assessment Model and

Figure 1. Seven Quality Categories

- 1.0 Leadership**
 - 1.1 Leadership System
 - 1.2 Company Responsibilities and Citizenship
- 2.0 Strategic Planning**
 - 2.1 Strategic Development Process
 - 2.2 Company Strategy
- 3.0 Customer and Market Focus**
 - 3.1 Customer and Market Knowledge
 - 3.2 Customer Satisfaction and Relationship Enhancement
- 4.0 Information and Analysis**
 - 4.1 Selection and Use of Information and Data
 - 4.2 Selection and Use of Comparative Information and Data
 - 4.3 Analysis and Review of Company Performance
- 5.0 Human Resource Development and Management**
 - 5.1 Work Systems
 - 5.2 Employee Education, Training and Development
 - 5.3 Employee Well-Being and Satisfaction
- 6.0 Process Management**
 - 6.1 Management of Product and Service Processes
 - 6.2 Management of Support Processes
 - 6.3 Management of Supplier and Partnering Processes
- 7.0 Business Results**
 - 7.1 Customer Satisfaction Results
 - 7.2 Financial and Market Results
 - 7.3 Human Resource Results
 - 7.4 Supplier and Partner Results
 - 7.5 Company-Specific Results

there was some information flowing amongst APPA colleagues about the Facilities Management Evaluation and Award for Excellence programs getting a facelift in order present the SAM family appearance. With the enthusiastic support from Dr. Moran, the Facility Management Services leadership staff decided to carry on where the division left off by applying the Baldrige model to the next level within their individual work units.

The first two work units selected were the Construction and Project Management Services and Customer Resource Center departments. An abbreviated version of the Baldrige application was chosen from the CCQS program referred to as

"Challenge Award." The value associated with this effort again came from having a *feedback report* that not only points out organizational characteristics that are worth preserving, but items that can help the organization perform at even higher levels.

Both of these work units received recognition awards from CCQS in the presence of Dr. Moran and other quality award constituents, but the true objective was to achieve something else. They were in need of a sound systematic process for aligning their departmental short and long term goals and objectives with those of their division of business affairs and campus community. They also needed a complimentary approach to measuring and communicating their progress along a meaningful continuum. The scoring criteria and feedback reporting processes would serve those needs. These processes are described in more detail in the application forms that can be downloaded from a number of websites. The Customer Resource Center's category application and feedback report defines where the organizational strengths are within that category of interest along with what would be given consideration to take that positive performance to higher levels. As previously mentioned, these comments are based on scoring criteria that was used as the basis for the new SAM

"matrix" (available on the APPA website at www.appa.org/sam). These feedback reports were then used to assess priorities and determine the annual goals and objectives for those work units.

The next step was to expand this program to other work units as well as reassess the progress of the first two work units. The next work unit that was selected was the Facilities Financial Services department. Two significant process improvements were made while that work group completed their "Challenge Award application." One dealt with reducing the cycle time between the time the application is submitted and when the feedback report is received. Since the CCQS program relies on volunteer examiners to provide feedback reports, it can take several weeks before the report is prepared and reviewed by that organization. Chris McCann, the department director, took the initiative to understand the feedback report process, and create a preliminary internal feedback report well in advance of the one provided by CCQS. The other process improvement was that she self-initiated action items that were clearly important prior to being assigned by Maurice Hollman to do so. For example, her department initiated customer feedback survey materials that addressed the opportunity to improve the customer feedback

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loop processes specific to that work unit. In taking such initiatives, she also began drafting the framework for the next level application for the "Prospector Award" that is only one step away from the development of a "Eureka Award" that the whole department intends on preparing in the future.

What can be demonstrated here is the development of a sound and systematic quality improvement process that, when amalgamated from the work units up through the department, can be aligned at the division or institution level. As this experience unfolds at USC, a growing number of colleges and universities are participating in the state, local, and national programs of similar structure. The newly revised SAM program will help the facilities organizations be "blanched" and "seasoned" well ahead of time and add some "BAM" to the new recipes.

Emory University

Emeril has a phrase that he often uses with respect to seasoning common ingredients like flour or eggs. He will say something like, "I don't know where your items come from, but where I come from, they don't come seasoned!" Then he proceeds to "kick the ingredients up a notch." Bob Hascall, senior associate vice president, Facilities Management Division at Emory University, was able to get some Baldrige of the pre-seasoned variety through a network of resources associated with Georgia's Ogelthorpe award program. Unlike the "seasoning" that was added at the staff level at USC, Emory's approach was to have a departmental application and feedback report provided by a local Ogelthorpe award program examiner. This approach has its advantages for organizations that have this expertise available and want to make sure that they are getting their quality initiative off on a good start. There are also APPA members like Mo Qayoumi at California State University/Northridge, myself, and others who have examiner training at the state and national level who will represent a growing number of organizations that have in-house Baldrige program capabilities. This approach was what helped the Emory Facility Management Division organization get a jump-start on achieving several significant accomplishments as a result of utilizing the following process.

The process began when Bob Hascall invited me as a representative of the APPA SAM program to attend one of his senior staff meetings. The concepts of SAM's application of the Balanced Scorecard and Baldrige principles were reviewed

along with the organizational growth model based on Baldrige scoring criteria. The organization was then introduced to the local resources available from the state Ogelthorpe Quality Award program. Following my introduction to the "essence of SAM," an Ogelthorpe award program examiner was retained to interview representative members of the organization in order to determine strengths and opportunities for improvement in the category areas of strategic planning, customer service, and process

improvement. Baldrige Categories 2, 3, and 6 respectively. The concepts of *Approach*, *Deployment*, and *Results*, as they relate to improvement opportunities, were then explained to the staff, and work plans were developed accordingly.

One key outcome, similar to the USC experience, was the determination that each department should develop its own set of strategic goals, which feed into the division's goals. Bob Hascall and his top leadership team of approximately 30 people now develop an annual plan centered on goals. They meet quarterly to discuss departmental goals and to assess where they are in meeting their objectives. Front-line staff now collaborates with the leadership system in order to set goals and develop work plans in support of achieving those goals along with identifying appropriate

performance metrics. The departmental leadership system, consisting of managers and supervisors, are then able to insure that they're departmental goals feed into the division's primary strategic goals.

Bob Hascall, in turn, insures that the division's goals and objectives support those of the university. The division's annual report to the university administration provides information in detail about details what the division has done



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in support of university goals. The information is also formatted around a Baldrige based feedback report in terms of strengths that support results and opportunities for improvement in terms of goals and objectives for the coming year.

This division-wide effort results in continuous improvement throughout the organization whereby all departments deploy a *sound and systemic approach*. It provides more structure for consistency and insures that all functions of the division are aligned with a specific and desired direction. The process also helps to identify key performance improvement metrics.

Another key determination was to establish program improvement teams and to assign a team to each of the seven performance excellence categories outlined by Baldrige. For instance, the Customer and Market Focus, Category 3 Team has developed an ambitious list of eight projects, which include:

- Scheduling and documentation of customer visitations
- Reinforcement of the building commissioning process
- Involving customers in long-range planning and priority setting
- Training Frontline employees in effective customer relations and communications
- Defining simple paths to access FM services
- Establishing a structured approach for recording customer complaints and compliments

- Creating customer satisfaction measures
- Benchmarking similar institutions in terms of customer satisfaction metrics

These and other similar strategies are enabling the organization to focus on key areas in each of the seven categories and are keeping organization-wide efforts aligned.

Both of these initiatives demonstrate focused, organization-wide processes and are aligned at the division and university levels. Both involve staff from Frontline and Leadership Teams and serve to pull the various FM departments together to focus on common goals. As with the SAM model and improvement matrix, Emory's recipes for success involved the blending of *sound and systematic processes that are uniformly deployed to achieve measurable results in balanced categories*.

Soka University of America

Another one of the signature Emeril statements refers to the relationship of food and seasonings. Once they have the right relationship developed, they become "happy, happy." Soka University of America is building a new campus in Aliso Viejo, an area near Laguna Beach in South Orange County, California. Archibald Asawa, vice president for administrative affairs, determined through his strategic planning processes that the entire facility management operations for that organization should be outsourced. This decision furthered the need to have sound and systematic processes in place to make sure that the owner/service contractor relationships contain the right mixture of seasonings to stay "happy, happy."

The current SAM model was therefore selected as the "seasoning of choice" for the development of contracted service agreements. This approach was first tested in 1991 for the Salk Institute by using an essence of SAM, Baldrige-based, Request for Proposal approach to the contracted security and general contractor services. (ref. Critical Issue series book number 9). The logic behind this decision was based on the desire to have the service contractor perform at the same level of expectations that the organization would otherwise have of its in-house operations. A Request for Qualifications for Soka University's contracted operations and maintenance services was therefore issued based on similar criteria. The RFQ basically followed a condensed Baldrige application guideline modified to reflect Soka University's preferences for the performance of O&M services.

The responses to the request for qualifications were reviewed by a panel of faculty

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and staff members who reached immediate consensus for short-list selection based on this process. The general feeling of the companies that did not make the short list was still favorable because of the value associated with preparation of what they can now use as a self assessment and improvement tool like that which has evolved with the current SAM model. A number of them were actually thankful for the educational process this provided. The finalists were also able to clearly describe how they were performing for other clients in common terms and measures much like the application of the SAM model to work units within an organization. Once the service provider is selected, the performance model and metrics in the SAM criteria will be used as a basis for performance assessment.

In addition to the facilities management applications, Archibald Asawa has been considering the use of the SAM model concept for other applications such as "ground up" strategic planning processes that would relate to shared governance issues. A growing number of colleges and universities, including Soka University of America, are also giving consideration to using the Baldrige for accreditation and institutional strategic planning purposes. Some of them even have their national and regional award applications and feedback reports on their web page. Other institutions include but are not limited to, Mount San Antonio Community College and Cuesta College in California,

Northwest Missouri State University, Richland College in Texas, Eastern Iowa Community College, and Terra Community College in Ohio.

APPA

New developments in the Facilities Management Evaluation Program and the Award for Excellence process/model after application/site visit/feedback report and scoring process, with Emory and USC as pragmatic examples.

Current revisions to the FMEP program and Award for Excellence programs reflect the desire to more closely integrate elements of quality, excellence, and continuous improvement into an assessment program.

Conclusion

"A good idea does not care who owns it" is an applicable phrase for what APPA is providing to its membership and higher education at large. As one of the early proponents for the Baldrige and Balanced Scorecard, it is particularly rewarding for me to see these good ideas enjoying a growing adoption rate. The phrase "the proof is in the pudding" is also an applicable phrase for the food recipe analogies. Emeril always places a final focus on presentation particularly since the viewing audience can only see and not sense the aroma of his recipes through what he would envision in the future as "smellevision." It is therefore important that the "essence of SAM" be applied to taste, and serve to enhance the presentation of our profession and the institutions we serve. Bon Appetit! 🍴

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RAISING THE BAR WITH TRADES STAFFING GUIDELINES

By Theodore J. Weidner, Ph.D., P.E., AIA



Just as APPA's Custodial Staffing Guidelines have become a standard in the industry and an invaluable tool for facilities professionals with responsibilities for the custodial/housekeeping function, the developing Trades Staffing Guidelines too will become an indispensable resource for the facilities profession. The creation of APPA's Trades Staffing Guidelines Task Force was intended to provide similar assistance for the much more complicated job of building maintenance.

How is the creation of staffing guidelines for building maintenance more complicated than cleaning? First, campuses have facilities that range from old to new. We construct new facilities every year that are often very different in operational or maintenance characteristics from the buildings constructed many years earlier. Second, a classroom/office building does not demand the same maintenance activity as a research-oriented chemistry or biology building constructed the same year.

Third, the overall condition of the facility as measured by the facility condition index (FCI) may dictate that employees spend a great deal of time addressing problems rather than maintaining it or preventing degradation; reduction of need is dependent on a major expenditure over two or more years.

Fourth, an environment of customer service may redirect employees to non-maintenance activities; it is often more politically correct to renovate an office at no cost than to maintain some chiller equipment. Knowledgeable facility

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officers know the difference and can justify doing the right rather than the politic thing.

The goal of the task force is to create a tool to assist managers and administrators in determining how many people may be needed to maintain a campus or the distribution of the trades or skills. In addition, the guidelines will provide the facilities professional with tools to predict the time-based trend of facility condition; is the facility condition index growing or shrinking?

The purpose of this article is to present preliminary information, descriptions of the levels that have been proposed, and a matrix of indicators for the Trades Staffing Guidelines. The levels and matrix are intended to mimic features of the custodial staffing guidelines.

Why a Guideline

In 1992, APPA published *Custodial Staffing Guidelines for Educational Facilities* to assist facility officers in determining the staffing needs for cleaning or to identify expectations from given staffing. The guideline became a valuable tool for facility officers to make quantitative adjustments to staff in order to meet user needs and to provide qualitative justification to administrators as to the capabilities of staff. There were facility operations that were challenged by the guidelines either to increase productivity or to adjust staff or expenses to better meet the guidelines. Facility officers and administrators challenged the guidelines; they were either too favorable to the custodial staff or not favorable enough. Did anyone else have a president tell you that Level 4 staffing should be pushed to deliver Level 2 service?

Those campuses with union agreements may also have met with significant resistance to purported time-motion measures. We do not work in a perfect world; the challenges of individual performance introduce anomalies in any guideline. But the Custodial Staffing Guidelines remain popular, and the book moved to a much-expanded second edition in 1998. Something was right about the custodial guidelines. And a guideline needed to be created for trades staffing too.

The condition of facilities, good or bad, affects the demand for facilities, either down or up. The institution's mission affects what the campus looks like and how buildings are constructed and maintained. Climate and regional differences affect whether there is a need for air-conditioning or heating maintenance activities or the mix of both. Older buildings, constructed of heavy masonry or timbers, require different maintenance activities from modern, lightweight steel and glass facilities. The differences between campuses and buildings on a single campus are potentially so great that they cannot be ignored. The task force remains undaunted. We are open to suggestions both before publication of the guideline and after; this is not a one-time effort.

Maintenance Definitions

While some would prefer to stick with a definition along the lines of "I know it when I see it," that won't hold water with a dubious supervisor or campus administrator. The task force looked at what constitutes maintenance activity. Below are working definitions of maintenance used by the task force.

Planned maintenance was divided into two groups, preventive maintenance and corrective maintenance.

Preventive maintenance comprises those activities that are performed on a scheduled basis annually, or more frequently, that prevents or predicts a larger maintenance effort or systems testing that is code required or for other programmatic needs. Examples include replacement of filters and belts, lubrication, vibration analysis, tightening of fasteners and connections, infrared analysis of equipment, debris removal, tube inspection, fire alarm, and emergency generator testing. There are several other kinds of preventive maintenance that occur less frequently, i.e., painting, tuckpointing, tube replacement, equipment rebuild, that are more capital in nature and will be discussed below.

Corrective maintenance consists of activities that are scheduled in advance and initiated by the facilities organization without the need for an external customer request. Examples include responses to preventive maintenance investigations such as a misaligned motor/fan assembly and replacement of overly hot circuit breakers or lamp ballasts that continue to function. Major (capital) maintenance is not included.

Reactive maintenance are activities that range from a minor problem with equipment operation and hot/cold calls to some vandalism repairs. These are unplanned and are a response to campus needs and activities. Many organizations refer to these as trouble calls or service calls. You may consider these to be of a nuisance nature requiring low levels of skill for correction; however, these are the efforts that facility organizations are often measured by; we will address these in another article. The task force subscribes to the belief that more planned maintenance greatly reduces the reactive maintenance.

Emergency maintenance can sometimes vary by campus or requester (as described above) but consists of activities that stop or significantly reduce immediate damage to facilities and protect human or animal life; they restore essential services. Examples include failures to utility distribution systems, sudden structural failures, and other interruptions that adversely affect other building systems. Additionally, some campuses consider graffiti removal an emergency.

Non-maintenance includes activities that are often performed by trades employees but do little to maintain or extend the life of campus facilities. Examples include construction of staging for graduation or other university sanctioned events, repair of furniture, and maintenance of research or laboratory equipment. Some of these activities

cannot be avoided. If these services are expected, they must be figured into the annual workload and staffing planned accordingly.

Capital maintenance is typically done as a separate effort outside of the maintenance trades and outside the annual operating maintenance budget. Research by Biedenweg and Hudson, Kaiser, and others have identified the funding level required to perform this work on a regular basis to control the accumulation of deferred maintenance. Examples of capital or major maintenance include large equipment rebuild or replacement, roof or window replacement, and system rehabilitation.

The Matrix

The Trades Staffing Guidelines are designed to be similar to the Custodial Staffing Guidelines by displaying characteristics in a matrix. We have developed the matrix of facility characteristics to assist the facilities professional and non-facilities administrator in understanding the guideline. It is divided into five levels. These levels provide a general description of the essential characteristics one might use to measure the effectiveness of maintenance and the level of service. They have been categorized with descriptive terms, similar to the custodial guidelines. The highest level is 1, described as **showpiece facility**. The lowest level is 5, crisis

response. Between these extremes are Level 2, **comprehensive stewardship**, Level 3, **managed care**, and Level 4, **reactive management**. There are several characteristics described in the matrix that further assist with the understanding of the levels and maintenance performed. *The entire matrix is displayed on pages 46-47.*

Characteristics

There are many different characteristics to determine whether good facility maintenance services are being delivered. The list of 11 characteristics identified herein may not be complete or the final word in facility maintenance. The task force believes this is an important starting point to describe essential elements of higher education facility maintenance.

We begin with **customer service and response time**. The first line of defense for a facility maintenance department is its ability to quickly meet the requests of customers. Is the staff large enough to address the reactive requests in a timely manner or are requests ignored because the entire staff is focused on emergencies and administrative changes to priorities? Some customers assume that the maintenance staff is waiting for a call to come in requesting service, good managers know that a lower level of staffing can still present that appearance while still keeping all employees assigned to important tasks.

At the opposite end of the spectrum is a staff so small that it can only address emergencies or respond to requests from top administrators. While some customers receive immediate response based on rank or position within the university, this outlying datapoint is more political in nature and is not the intent of the metric. Between the

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extremes lies customer service that may be more typical on our campuses. Level 2 recognizes that good customer service is the result of a majority of work, including non-maintenance, being accomplished within one week of request. Level 3 service response is completed within one month but may come at the cost of preventive maintenance work that customers don't immediately recognize as important. Level 4 service is so poor that improvements in response time come at the cost of essential maintenance. Level 5 service addresses emergencies only. While reactive maintenance requests may not have the same import on preservation of facility life or condition, they are likely the primary measure of the service by most campus customers or users. They should not be ignored. Even when time to completion of a request is long, if there is a service response to the customer-waiting problems can be mitigated.

Customer satisfaction is a common measure for all service industries. In our case, the customers are often internal and take personal pride in the appearance of the campus. They want the facilities staff to provide good buildings that operate well. There is a synergistic effect when customers are satisfied; they become more tolerant of facility issues when anomalies occur. They are tolerant of costs for maintenance because they consider quality facility maintenance to be worth the price. They trust the facilities staff and can provide frontline information that will assist in preservation of the building.

When preventive maintenance tasks are completed in a timely and thorough manner, other maintenance tasks are reduced. This characteristic recognizes the truism by focusing on the organization's ability to prioritize and address preventive work. As described above, in order to keep customer satisfaction up, some organizations ignore preventive maintenance. High levels of maintenance are characterized by accomplishing most or all preventive maintenance work.

As part of the balancing act that must be performed when staffing is not at an ideal level, the facility manager cannot ignore preventive maintenance completely. However, when preventive maintenance drops to very low levels, it is likely that the majority of time is spent on reactive or emergency maintenance resulting from poor customer satisfaction and facility condition. The **maintenance mix** is a similar and important measure that allows the facility manager to balance his or her workforce to address the many changing needs of the campus.

Interior aesthetics is the one characteristic that we all think we know. Does the building appear new? Are the surfaces clean, paint fresh, unblemished? Are accessible

ceilings or access panels free of fingerprints from the maintenance staff? Are surfaces smooth or rough? Some of these are difficult to achieve because they are dependent on the original design of the facility. If the designer or builder of the facility were to see it today, would they recognize it as they remember it on opening day? And in some other cases, is the facilities staff able to maintain the building so visitors feel welcome and comfortable in the building rather than concerned for their safety. Interior aesthetics is not to be confused with cleaning issues addressed by the Custodial Staffing Guidelines. However, it is likely that facilities with a high "CSG" level will also have a high "TSG" level, reflected in part by the interior condition.



Exterior aesthetics is similar. In the best facilities, windows have a good finish with no apparent holes at the sash/laçade interface and no broken or cracked panes; moving elements fit and operate well. Walls are straight and solid, free of efflorescence, spalling, distortion, or gaps. Roof drains function properly, preventing streaking and staining; there are no roof leaks. At the opposite end of the spectrum, windows are cracked, do not operate correctly, and are drafty. Walls exhibit gaps in the vapor barrier via stains, efflorescence, or spalling; expansion joints do not work properly resulting in cracks or gaps. There are roof leaks and both interior and exterior elements are damaged. Some of these factors are affected by major or capital maintenance more than annual maintenance, but many can be controlled through sufficient staffing, the focus of the guideline.

Distinguishing between architectural decisions and operating maintenance performance can be a challenge with **lighting**. Designers sometimes want subdued or reduced lighting to create a mood or atmosphere. However, in areas that are intended for reading, study, and other detail activities, a well-run facility exhibits bright and clean, attractive lighting. Fixtures are clean and free of dirt, not clouded as the result of age or burned from an overly hot ballast or lamp. Diffusers, reflectors, and/or shields are all in place and functioning as designed. Custodial staff, depending on regional or contractual norms, can address some lighting issues. However, mechanical or electrical elements of luminaires are a trades issue to address.

Independent of customer service and measurable primarily through adherence to departmental policies is **service efficiency**. This characteristic focuses on the organization's ability to predict, prepare and address, record, and follow-up

Continued on page 48

Level	Description	Customer Service and Response Time	Customer Satisfaction	Preventive Maintenance vs. Corrective Maintenance	Maintenance Mix	Aesthetics(I
1	Showpiece Facility	Able to respond to virtually any type of service, immediate response	Proud of facilities, have a high level of trust for the facilities organization	100%	All recommended PM's are scheduled and performed on time. Reactive maintenance (e.g. spot relamping and adjusting door closers) is minimized to the unavoidable or economical. Emergencies (e.g. storms or power outages) are very infrequent and handled efficiently.	Like new finishes
2	Comprehensive Stewardship	Response to most service needs including limited non-maintenance activities, typically in a week or less	Satisfied with Facilities related services, usually complimentary of facilities staff.	75-100%	A well developed PM program; most required PM's are done but frequency is slightly less than per defined schedule. Appreciable reactive maintenance required due to systems wearing out prematurely and high number of lamps burning out. Occasional emergencies caused by pump failures, cooling system failures, etc.	Clean/crisp finishes
3	Managed Care	Services available only by reducing maintenance, one month or less	Accustomed to basic level of facilities care. Generally able to perform mission duties. Lack of pride in physical environment.	50-75%	Reactive maintenance predominates due to systems failing to perform, especially during harsh seasonal peaks. An effort still made at PM: priority to schedule as time and manpower permit. The high number of emergencies (e.g. pump failures, heating and cooling system failures) causes reports to upper administration.	Average finishes
4	Reactive Management	Services available only by reducing maintenance, one year or less	Generally critical of cost, responsiveness, and quality of facilities services.	25-50%	Worn out systems require manpower to be scheduled to react to systems that are performing poorly or not at all. Significant time spent procuring parts and services due to the high number of emergency situations with weekly reporting to upper administration. Possible PM work consists of simple tasks and is done inconsistently; e.g. filter changing, greasing and fan belt replacement.	Dingy finishes
5	Crisis Response	Services not available unless directed from top administration, none except emergencies	Consistent customer ridicule, mistrust of facilities services.	0%	No PM performed due to more pressing problems. Reactive maintenance is a necessity due to worn out systems (e.g. doors won't lock, fans lock up, HVAC systems fail). Good emergency response because of skills gained reacting to frequent system failures (no reporting, upper administration is tired of reading the reports).	Neglected finishes

Guidelines Task Force

Exterior	Lighting	Service Efficiency	Building Systems Reliability	Fac. Maint. Operating Budget as % of CRV	Campus Average FCI
Windows, doors, trim, exterior walls are like new	Bright and clean, attractive lighting.	Maintenance activities appear highly organized and focused. Typically, equipment and building components are fully functional and in excellent operating condition. Service and maintenance calls are responded to immediately. Buildings and equipment are routinely and regularly upgraded keeping them current with modern standards and usage.	Breakdown maintenance is rare and limited to vandalism and abuse repairs.	> 4.0	< 0.05
Watertight, good appearance of exterior closures.	Bright and clean, attractive lighting.	Maintenance activities appear organized with direction. Equipment and building components are usually functional and in operating condition. Service and maintenance calls are responded to in a timely manner. Buildings and equipment are regularly upgraded keeping them current with modern standards and usage.	Breakdown maintenance is limited to system components short of MTBF (mean time between failures).	3.5 - 4.05	0.05 - 0.15
Minor leaks/blemishes, average exterior appearance.	Small percentage of lights out, generally well lit and clean.	Maintenance activities appear to be somewhat organized, but remain people dependent. Equipment and building components are mostly functional, but suffer occasional breakdowns. Service and maintenance call response times are variable and sporadic, without apparent cause. Buildings and equipment are periodically upgraded to current standards and use, but not enough to control the effects of normal usage and deterioration.	Building and systems components periodically fail.	3.0 - 3.5	0.15 - 0.29
Somewhat drafty and leaky exterior, rough looking exterior, extra painting necessary to prevent further deterioration.	Numerous lights out, some missing diffusers, secondary areas dark.	Maintenance activities appear somewhat chaotic and are people dependent. Equipment and building components are frequently broken and inoperative. Service and maintenance calls are typically not responded to in a timely manner. Normal usage and deterioration continues unabated making buildings and equipment inadequate to meet present use needs.	Many systems unreliable. Constant need for repair. Backlog of repair needs exceeds resources.	2.5 - 3.0	0.30 - 0.49
Inoperable windows, leaky windows, unpainted, cracked panes, significant air/water penetration, poor appearance, accelerated deterioration.	Dark, lots of shadows, bulbs and diffusers missing, cave-like, damaged/ hardware missing.	Maintenance activities appear chaotic and without direction. Equipment and building components are routinely broken and inoperative. Service and maintenance calls are never responded to in a timely manner. Normal usage and deterioration continues unabated, making buildings and equipment inadequate to meet present use needs.	Many systems non-functional. Repair only instituted for life safety issues.	< 2.5	> 0.50

on maintenance activities. Is the message from a preventive maintenance service call or building review becoming a planned corrective repair in an orderly manner? Are materials and tools for a service call prepared in advance or must the worker make several trips back to the shop to get everything? Is there a clear record of work completion with fault and correction codes accurately recorded? Is the repair long-lasting or does it require numerous call-backs? Was the customer informed of the completed work and given an opportunity to comment? Modern maintenance management systems can assist the facilities professional in predicting when building components are failing at a high rate if the data is gathered following a service call. If service information is gathered and maintained, the manager has the opportunity to recommend or delay major system repairs that affect the accumulation of deferred maintenance. If the organization is not efficient, system failures become the normal initiator of service calls and user activities are affected by frequent outages.

In a similar manner, good maintenance is measured by **building system reliability**. It is desirable to have major building systems serviced on a planned basis so that building users are notified in advance of an outage and can plan. When there is inadequate staff to perform preventive or corrective maintenance building systems become less reliable and fail without warning. Some system failures produce secondary damage or failures to other systems, i.e., roof leak or pipe break. In some cases, unreliable systems cannot be ignored and must be repaired, on an emergency basis, to protect life safety.

Harvey Kaiser and others have proposed measuring the **facilities maintenance operating budget as a percent of the institution's current replacement value (CRV)**. Large operating budgets result in large facilities staff and the resources needed to support the staff with equipment, materials, training, and supervision. The Trades Staffing Guidelines Task

Force has proposed using the Strategic Assessment Model values. These still require some testing for validity.

Similarly, the well-known **average facility condition index (FCI)** has been used to indicate facility challenges facing a campus and operations. The values presented in the matrix reflect the task force's proposal, which we believe more accurately represents existing conditions. These are very different from the long-standing norms. We encourage continued discussion and comments about this characteristic.

The TSG task force finds it desirable to integrate other APPA models in the matrix and has included the **Strategic Assessment Model (SAM) Levels**. In his article "SAM in a Nutshell" (*Facilities Manager*, March/April 2000), Larry Givens indicated that "an organization may be at a different level for each perspective." That sentiment likely applies to the Trades Staffing Guideline matrix as well.

Summary

There are many characteristics that describe annual maintenance. Each characteristic of annual maintenance can be performed at different levels of thoroughness and intensity. They have been assembled into a matrix that allows for comparisons between levels as well as across characteristics. These characteristics and levels can then be used to develop a model that will provide recommended staffing for trades personnel to maintain educational/institutional facilities. With such a model the facilities professional may use it to determine how

many trades personnel are required to meet institutional goals for facility maintenance, or to report to the administration and trustees how funded staffing affects facility maintenance. The information can also be used as a benchmarking tool for improvement or financial decisions.

The work of the Trades Staffing Guidelines Task Force continues, and we still have a goal of completing a final draft of the guideline this year. We will be contacting volunteers soon to beta test portions of the model. Additional volunteers, particularly from small, private, colleges, will be most welcome. 🏢



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DEVELOPING RELATIONSHIPS *in Spite of* TECHNOLOGY

By Fred Gratto

Nobody would dispute the fact that technology has helped all of us do our jobs better. We have more information than ever before. We are able to respond to problems faster. We operate machinery and equipment more efficiently. Personnel are organized more effectively. Input from people on campus is received sooner. Focus on customer service has never been higher. Times are good. Great deeds are being accomplished every day.

All this has occurred because we have the knowledge to do our jobs well, because we have a spirit of service, and because we have access to common technological advances. They have made our jobs easier because of the convenience they provide, but they have also made us more vulnerable because

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so many relationships have been created. Author J.P. Kotter wrote, "A century and a half of technological evolution has produced communication and transportation technologies that make our entire planet a global marketplace. The changes mean that today's executives deal with thousands of interdependent relationships—linkages to people, groups, or organizations that have the power to affect their job performance."

Cellular phones, fax machines, and the Internet have created astounding advances in the ways we do business and interact with each other. The instant communication they provide has changed the world, and it's often hard to believe that we ever were able to get by without them because they enable us to do so much. The impact on work performance has been very positive, but the impact on developing relationships in the workplace has not been equally impressive.

Instant communication without a face isolates people and makes it difficult to develop meaningful relationships. This takes some of the fun out of the job and leaves people just going through the motions. This, in turn, makes it hard to sustain quality service or products—and it shows.

Everyday, people everywhere receive goods or services from someone who doesn't care. We're all familiar with the sullen checkout clerk, the surly repairperson, or the unconcerned flight attendant. These people cause problems, and they become *our* problems because leaders are supposed to have the big picture and be responsible for the organization's well-being and productivity.

But we need quality relationships and a sense of teamwork to have a healthy organization. For these to prosper, we need to focus on the human component of management. Technology has put the world at our fingertips, and the people who make our organizations work are equally accessible if we will just get away from the computer and go see them.

Appointment to leadership does not put one's humanity on hold. We need to get out and about to share our concerns, see how people are doing, and ask what we can do to be of help. It seems to me that a person who sincerely tries to serve others has a distinct advantage, because there is so little competition. I learned a long time ago that the best way to influence people is to talk about what they want. Futile chatter about my desires is a waste of time.

We've heard the statement that you can win more friends in two months by becoming interested in people than you can in two years by trying to get other people interested in you. It's true. When I need to persuade someone to do something, I try to remember that I must find a way to make the person want to do it. I talk to people all the time about what they want from our organization and how they can get it. This works better in person rather than with a computer. The colleges where we work probably don't offer a degree in service, but it's really what we need to be working toward.

People who can put themselves in the place of others, who really understand them, are good at making friends. This is

critical to our success as leaders. In fact, over 60 years ago Dale Carnegie, in his classic book *How To Win Friends and Influence People*, said: "In our interpersonal relations we should never forget that all our associates are human beings and hunger for appreciation. It is the legal tender that all souls enjoy. Try leaving a friendly trail of little sparks of gratitude on your daily trips. You will be surprised how they will set small flames of friendship that will be rose beacons on your next visit." We do hunger for appreciation. In fact, we all want the same things, all of us. We want to feel welcome. We want to be understood. We want to feel important. We want to be able to trust people.

Leaving a friendly trail as Carnegie suggests is a very good idea. We have to sow before we can harvest. This is not a trendy new approach to building relationships. It is a proven technique made necessary by the difficulty involved and the time required to develop relationships that bring positive results. It is hard work sometimes, and not all leaders like to do it. We can refuse to sow, but just like the farmer who decides not to plant, we do so at our own risk. T. Downs says, "Today, because we insist on harvesting alone, and because harvesting is getting harder to do, we are saying nothing at all to more and more people."

I like sowing and harvesting, so I spend a lot of time walking around campus visiting people who work in our department. I think they appreciate the opportunity to share

ideas and concerns. I find these conversations helpful as long as I remember to talk less and listen more. Besides, it's great to get to know people better and establish relationships. Stephen Covey writes, "In the last analysis, what we are communicating far more eloquently than anything we say or do. We all know it. There are people we trust absolutely because we know their character. Whether they're eloquent or not, whether they have human relations techniques or not, we trust them, and we work successfully with them." It is hard to develop relationships and determine character through a computer screen.

Stop By Once in a While

Some of us remember *The Andy Griffith Show* and Floyd's Barber Shop. People would drop in to talk even if they didn't need a haircut. Society, homes, and offices everywhere used to be a little bit like that. Today, it seems like this is no longer the norm. C. Swindoll states: "No longer are we a share-and-share-alike people. We are independent cogs in complex corporate structures. We wear headsets as we jog or do our lawns or walk to class or eat in cafeterias. Our watchword is 'privacy,' our commitments are short-term. Our world is fast adopting the unwritten regulation so often observed in elevators: Absolutely no eye contact, talking, smiling, or relating without written permission from the management. The Lone Ranger, once a fantasy hero, is now our model, mask and all."

It is easy to avoid the risks of relationships, skip all the idle chatter and friendly greetings by sending an e-mail or fax. This saves time but does not save relationships. My wife once reminded me that a visit to someone's office beats a phone call every time. She was right. The old Barbara Streisand song was also right—people who need people are the luckiest people in the world. We know this but sometimes technology gets in the way. Perhaps we need to be reminded about what it takes to be a good leader.

APPA's Lander Medlin states: "Just as a tennis player can improve with practice, so too can individuals improve their ability to lead. We must move from the narrow view that leadership is about efficiency, control, and stability in maintaining the status quo toward an understanding of leadership as encompassing effectiveness, continuous improvement, empowerment, and relationships."

It's not good enough to just be concerned about getting the job done. We can't expect to become more effective if we don't get away from the computer to go see people and talk to them about the way things are getting done. We can't expect continuous improvement if we don't have a committed

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team that fully supports the mission. We can't expect to have their full support if they never see the leader because we're always in front of the monitor. We won't be able to empower people if we don't know them and their capabilities. We won't be able to develop relationships if we don't push away from the desk, go see people, and invest a little bit of our time and personal peace. "Personal peace means just to be let alone, not to be troubled by the troubles of other people, whether across the world or across the city—to live one's life with minimal possibilities of being personally disturbed," according to F. Schaeffer.

Leaders are supposed to be involved in the trouble of others. Their troubles are our troubles. We're not on the job to get personal peace. We're on the job to help other people so they can get the job done. This means making friends and developing relationships. It helps to extend ourselves and do things for other people. This requires time, energy, unselfishness, and thoughtfulness. It might not require a computer. Another thing I remember about helping people is a statement my mother made many years ago: "The most important thing you wear everyday is your smile." Leaders can smile. Computers can't.

The Game of Tens Will Help You Consider Priorities

Cultivating relationships is a difficult notion for our aimless and lonely generation to understand. Business transfers to distant states, organizational changes, promotions, and job-hopping—in each of these situations, relationships are sacrificed. All of this, as well as the irritating hassles and energy involved in developing and sustaining meaningful relationships, inclines some leaders to not be involved as much as they should be. I've seen leaders avoid getting to know people by working really hard to maintain the distance a hierarchy provides.

It's hard to maintain relationships, so you have to want to be good at it. To make it easier and be good at it, you have to want to be involved with people and understand the benefits of doing so. Investing your time is also needed. Sometimes we only see our teammates at staff meetings once a week. Sometimes, mutual support and genuine interest are replaced by anonymity, cynicism, and apathy. This makes relationships difficult.

Sometimes, leaders don't work as hard as they should to nurture relationships. Sometimes, leaders stay in front of the

computer too much and let others handle the people problems and chit-chat. This approach can cause problems for a leader because relationship skills are just as important as technical skills. Charlie Jenkins states: "You can't lead in a vacuum. Leaders are leaders only because they have followers, and that means lots of one-on-one relationships." These relationships have a big impact on our level of success. It's not any different for the faculty on our campuses. Here's a sobering reality that they must consider regarding the process of becoming tenured: "Know this: All your achievements aren't

worth a hill of chalk dust if your senior colleagues hate you," writes L. Douglas. Since the same applies for leaders in facilities management, these are words worth remembering.

Relationships are easy to remember but people and events are often difficult to remember. P. Morley provides a revealing illustration of the fact that people find satisfaction in relationships. It's called the rule of tens. He asks questions like these. Can you name the ten richest people in the United States? Can you name the last ten Super Bowl Winners? Can you name the last ten presidents? Can you name the last ten Noble Prize winners (any category)? The rule of tens is an interesting and dispassion-

ate way to point out that even the highest achievers among us will soon be forgotten.

Morley's other point in this illustration is made clear when he asks questions like these. Can you name your ten best friends? Can you name ten people who would attend your funeral? Can you name ten people who helped you in your career? Can you name ten people who have had the biggest impact on your life? These simple questions underscore the truth that people value relationships. At retirement parties or on other occasions when people move on, it is common to hear someone say that the thing that will be missed most about the job is the people. Often, it is relationships with people at work that help us keep going. Motivation is what happens between paychecks, so anything a leader can do to help people feel that they are appreciated and belong is worth doing. Efforts to do this probably require more face to face meetings and fewer e-mail messages.

Four Hungry Children and a Crop in the Field

In 1977 Kenny Rogers had a hit record named "Lucille," in which the song's narrator sings of the pain brought on by his departing spouse. Pain is inevitable in life, but misery is



optional. Leaders should share burdens, offer encouragement, and help others get through troubles.

However, we probably can't help people in our workplace, or be helped ourselves, if we don't have genuine relationships. People will know when we don't really care. Certainly, of course, we can't help with a problem like the one with Lucille if we're not even aware of it. We need to stay involved so we can be aware of these things among the people we work with. We need to stop by and ask people about their children, the weekend golf tournament, or the visit from the in-laws. We need to be interested in people, truly interested. My dad told me this a long time ago: You need to be the kind of person your dog thinks you are. This is best accomplished in person, but even an e-mail message might help.

My observation is that organizations have plenty of people who think that no one cares about them. It's easy for them to get lost in the shuffle, to be a nameless face in the crowd. Sometimes, they can drift awfully close to dangerous extremes without anyone even knowing about it. That's why those of us in leadership are always trying to find ways to bring people out of anonymity, to cultivate relationships, and to show people that we really do care about them. I'm convinced that there are lots of people in our work environments who are drying up on the vine because of a lack of encouragement. It is our job to provide the encouragement, because there is no medicine like hope, no tonic so powerful as the expectation for a tomorrow that will be even better than today. And sometimes, even the smallest gesture can have a large impact on someone else.

One of the things we do in our organization is to look for trouble. Our collective notion is that through preventive maintenance work orders and frequent visits on campus, we ought to be able to see situations and resolve them before they become problems. This works well for facilities, and I think it works well in relationships with people. Leaders ought to take the initiative to stay in touch with people and decide how they can be of help. When there's a communication problem or other matter between a child and a parent, it is the parent's responsibility to take the initiative to resolve the problem. Waiting for the child to take the first action to resolve conflict is like waiting for a watch to repair itself.

Likewise, as leaders of organizations, it is our responsibility to set the example, help establish relationships, and provide a culture in which people value teamwork. These yardsticks of an effective organization won't just happen without a leader who encourages people, shares vision, gets rid of half-hearted attitudes, and helps people have fun on the job.

Five years from now, each of us will be pretty much like we are today except for two things, the books we read and the people with whom we develop relationships. For our personal gain it is a good idea to meet new people, nurture friendships, and gain new experiences. If this is beneficial for leaders, it must be equally good for others.

Leaders have little impact on what others read, but they can have an impact on developing relationships in the workplace. I know this now, but several years ago I was still too focused on getting the job done and doing what I wanted to do. Here's an example. We don't own a stump grinder because there is not enough need to justify buying one. From time to time, therefore, we contract this service. The owner of the company we work with once invited me to lunch, but I declined because I wanted to go jogging on campus, which I do everyday at noon. About a year later I learned that the company also provides a composting and hauling service. Since the location we have for handling this work is so confined, I was interested in resolving our problem and establishing a relationship that would benefit both of us. We were able to do this. Unfortunately, we hung on to one of our problems longer than we should have because I didn't have the right understanding about developing relationships. Since then, I've tried to be more like one of our custodians. She spends much of her time talking to the young women in the dorm she cleans, giving them advice and caring for them. She serves as surrogate mom for a lot of them and has become well known for her care and eager willingness to get involved.

It's clear to me that leadership success is dependent upon the ability to establish and sustain relationships. This is best accomplished in person rather than with technology. If you want to contact me about any of the ideas presented here, don't bother to call because I might not be in the office. I'll probably be on campus talking to people and seeing how things are going. So please send me an e-mail message instead! 📧

References

- Carnegie, Dale. *How to Win Friends and Influence People*. New York: Simon and Schuster, 1981.
- Covey, Stephen. *The Seven Habits of Highly Effective People*. New York: Simon and Schuster, 1989.
- Douglas, L., and A. George. "Gaining Tenure: Rules Your Chairman Never Told You." *Chronicle of Higher Education*, May 5, 2000.
- Downs, T. "Finding Common Ground: Re-establishing the Importance of Sowing the Gospel in Today's Culture." *The Real Issue*, Christian Leadership Ministries, 2000.
- Jenkins, Charles W. "The Value of Relationships." *Facilities Manager*, May/June 1999.
- Kotter, J.P. *Power and Influence: Beyond Formal Authority*. New York: Free Press, 1985.
- Medlin, E. Lander. "Leadership Through Relationships." *Facilities Manager*, November/December 1999.
- Morley, P. *The Man in the Mirror*. Grand Rapids, Michigan: Zondervan Publishing House, 1997.
- Schaeffer, F. *How Should We Then Live?* Wheaton, Illinois: Crossway Books, 1983.
- Swindoll, C. *Strengthening Your Grip*. Waco, Texas: Word Publishing, 1982.

FACILITY CONDITION ANALYSIS

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ELEVATOR ENGINEERING

• operations and maintenance analysis • elevator engineering and maintenance analysis •

INFRASTRUCTURE: UTILITY ANALYSIS

• operations and maintenance analysis • elevator engineering and maintenance analysis •

• elevator engineering • infrastructure: utility analysis • construction management •

• infrastructure: utility analysis • operations and maintenance analysis •

• construction management • infrastructure: utility analysis •

• infrastructure: utility analysis • deferred maintenance / capital renewal management •

ENERGY SYSTEMS: EVALUATION AND DESIGN

• construction management • utility analysis • energy systems: evaluation and design •

• deferred maintenance / capital renewal management • energy systems: evaluation and design •

• energy systems: evaluation and design • deferred maintenance / capital renewal management •

• energy systems: evaluation and design • deferred maintenance / capital renewal management •

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• infrastructure: utility analysis •

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• infrastructure: utility analysis •

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Improving INDOOR AIR QUALITY in St. Cloud Schools

By Mike Forer and El Haus

Teachers were complaining of stuffy classrooms, getting headaches, and not feeling well. Our school nurse said more children had asthma and allergies and were missing school. How could we make our buildings healthier places in which to work and to learn? As a first step, using *Tools for Schools*, provided by the U.S. Environmental Protection Agency, we took a baseline survey of all our buildings. We looked at carbon dioxide and humidity levels in classrooms, identified rooms that had problems, and began changing the ventilation systems in the buildings. We found ourselves in the indoor air quality business!

We presented our work at a statewide indoor air quality (IAQ) training session and attended a U.S. Environmental Protection Agency conference to learn more about how to use their *Tools for Schools* kit. In addition to the initial baseline survey, the *Tools for Schools* kit provided guidance for investigating and evaluating IAQ problems, soliciting input from District 742 staff, and developing an indoor air quality management plan, which ultimately included district policies and procedures. *Tools for Schools* launched us into a proactive approach to IAQ, which continues today.

In 1997, our IAQ efforts reached a new level. During that spring and summer, central Minnesota was lashed with severe

rainstorms, accompanied by hail and high winds. Suddenly, we had a wet school! With water in the building and the hot summer air, mold quickly began to grow on upper decking, ceiling tile, and carpeting. These were new problems and more complicated than simply providing adequate fresh air or proper humidity levels.

We contacted an indoor air quality specialist to diagnose the problem. The walls in the school were improperly constructed and had allowed moisture into the building. The walls would require rebuilding to permanently eliminate the mold growth. From the IAQ specialist we learned how mold grows, how to remediate mold problems, and how to stop them from occurring. Fixing the problem in this school was expensive. Rather than wait for problems to happen, we realized that we needed to prevent problems and tell school board members, the superintendent, faculty, and parents what we were doing and how they could help us.

After studying *Tools for Schools*, we decided that what the district really needed was an IAQ Management Plan that addressed causes of poor IAQ and established ongoing communications to key groups. The consulting firm, the Clean Air Group, agreed to work with us to develop an Indoor Air Quality Management Plan, and accompanying policies and procedures.

Our first step was to ask people to help us. We knew that who was on the Planning Committee was critical to building an understanding of the issue and generating support for our work. We knew that improving IAQ would require engineering changes and, even more importantly, would require people to change their attitudes and some activities. We recruited a school board member, the head of the teacher's union, the head of school nursing, an elementary principal

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who has had IAQ problems in her building, the district's business manager, and representatives from building maintenance. Later we added a parent, who has a chemically sensitive child, to the committee. These individuals' leadership and ongoing advocacy with their colleagues were critical to our success.

The first two or three meetings were difficult. Committee members lacked a common understanding of IAQ issues, and we struggled with defining what we would include in the plan and what our goals should be. The consulting firm helped keep us on track and encouraged us to think *outside the box*, which proved invaluable. For example, all IAQ problems are not related to heating, air conditioning, and ventilation systems; there are many things that may cause an IAQ problem. Everyone on the committee participated in that process and was open, describing IAQ problems they saw. The committee met every four to six weeks for approximately one year, with the consultants working directly with us between meetings.

Committee members agreed upon a vision and six goals for the IAQ Plan. The vision statement is "that District 742 (the Saint Cloud Area Public Schools) students, faculty and staff work and learn in buildings that have high quality indoor air."

The six goals for the IAQ Management Committee and for the district are:

1. Communicate regularly about IAQ with parents, faculty, students, and other district departments
2. Integrate IAQ as an integral part of the overall maintenance of school buildings
3. Purchase equipment that improves IAQ
4. Develop and implement a district policy and administrative procedures that address:
 - a. Animals in elementary classrooms
 - b. Animals in middle school and senior high classrooms
 - c. Upholstered furniture in facilities
 - d. Use of floor coverings
 - e. Housekeeping
 - f. Use of space
 - g. New construction and remodels
5. Fund IAQ work from the health and safety funds made available through the State of Minnesota, district operating funds, and the district capital budget
6. Conduct a semiannual evaluation of IAQ issues and progress, identify new issues, and suggest ways to address them. The IAQ Management Committee leads this effort with ongoing support from the superintendent, school board, and faculty.

Members of the Planning Committee, our staff, and the consultants developed specific strategies and tactics to reach each goal. Currently we are implementing the many facets of the plan.

The most complex part of the process was developing the district policy and administrative procedures. We agonized over the floor covering policy. Children learn from and love

the animals that are brought into classrooms. Yet, when the administrative procedures were finalized, we all were in agreement. Our next big challenge, which we are not doing, is to communicate the policy and administrative procedures directly to each faculty member and ensure they are being followed.

The essence of each policy is:

- **Animals in the Classroom:** limit animals in classrooms to those used in curriculum projects; they cannot be kept in classrooms long-term
- **Upholstered Furniture:** eliminates upholstered furniture other than that purchased by the District after May 2000
- **Floor Coverings:** specifies that hard surface floors should be installed in most areas of schools when carpet is replaced or in new constructions
- **Housekeeping:** gives teachers and students the responsibility for helping the custodial staff keep their classrooms clean
- **Use of space:** establishes guidelines for conversion of non-classroom space to space for faculty and students
- **New Construction and Remodeling:** places indoor air quality as a priority issue in the design and construction of new schools and when existing buildings are remodeled

After talking with other district leaders, we believe we are on the cutting edge of indoor air quality management and that our efforts are already paying off for our district. We think several things helped us come as far as we have.

The administration's willingness to admit IAQ problems and to address them.

- The school board, superintendent, business manager, and key leaders took the time to learn about IAQ and to understand its complexities. They continue to give their ongoing support to our work
- A planning process that engaged representatives from throughout the district. The planning process must be thoughtful and deliberate
- Realistic, yet stretch goals supported by a plan that is actually being used
- Frequent communications to the school board. We told them what we were going to do and presented the IAQ plan and policies to them for comment and approval. Each year we will update them on our progress and future plans
- Monthly staff newsletters addressing IAQ issues and meetings with staff whenever needed
- Our willingness to think outside the box, take risks, and try some new things.

We are proud of how far we have come. The work is ongoing, but the best part is that now we have an actionable plan to work with, support from our colleagues in the district, and assistance from IAQ Committee members and others in the community. 🏡

JUST HOW SERIOUS HAS THE STUDENT TRANSFER SITUATION GOTTEN ON YOUR CAMPUS?



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PURSuing THE CGM:

The PGMS Certified Grounds Manager Program

By George Van Haasteren, CGM



One of the most important things that you can do to improve your career is to continue your professional development. One step that shows your commitment to grounds management and your career is joining those who have become a Certified Grounds Manager (CGM) over the last 20 years. The Certified Grounds Manager program, developed and offered by the Professional Grounds Management Society (PGMS), is the first and premiere program of its type in the Green Industry.

What does it mean to become a Certified Grounds Manager? It represents that you have met the standards of PGMS for grounds management through education and experience. Being certified puts you at the top of your profession. Certification proves that you are dedicated to your profession by

expanding your goals and continuing your professional development. It also means that you manage your grounds maintenance operation by using organizational, financial, and management skills.

How do you become certified? Simply put, it combines the requisite education and experience, plus passing the open- and closed-book tests and having the site you maintain

reviewed by fellow CGMs. Sure it's hard work; anything worth having is.

Everybody knows that M.D. following an individual's name means they're a medical doctor. The letters CPA signifies the individual has met the standards and fulfilled the requirements to be a certified public accountant. And CEM represents those individuals who have become certified energy managers. More than a few cryptic initials may follow a name, as many associations utilize professional certification to recognize individuals for their dedication to their chosen career and their ability to perform to set standards. I believe that when you ask a certified professional "Why?" they will tell you that the certification process is one of the single most important steps you can make in career development.

George Van Haasteren is director of grounds operations at the Dwight-Englewood School in Englewood, New Jersey. He also serves as the First Vice President of the Professional Grounds Management Society, an APPA strategic alliance partner. He can be reached at 201-569-9500 ext. 4321 or cgm35@aol.com.

In today's world we all need the values of certification. See the next page for the top ten reasons to become certified. That includes the individual grounds professionals as well as those who benefit from our services. Anyone can call themselves a grounds manager, and the public has no way of evaluating the reliability of the claim. Certification certainly provides one undeniable barometer for everyone.

Ultimately, certification is intended to assure better use of public and private personnel, equipment, supplies, and resources by trained personnel. As well, the basis of grounds management and the activities associated with it are articulated to a wider audience through such recognition.

The real benefit of certification will be when more grounds managers are certified and employers begin recognizing it. The results will then be higher pay, and the certified person will be given the priority in hiring.

The grounds management profession needs to be more recognized for what we do. Some people feel that simply because they have planted a bush or mowed their lawn, they are qualified to do our job. Or worse, others (such as institutional decision makers) might think they can.

With certification, our presentations, requests for funds and equipment, and recommendations carry more weight. Personally this has happened to me. I would strongly urge anyone who might benefit from the program to pursue it. The benefits both professionally and personally are well worth it.

Remember that each individual certified grounds manager is also contributing to that larger picture of improvement to the entire profession. We're in a profession that requires ever more technical and management ability and dedication; but we must draw attention to that. That's our job to do, individually and collectively.

PGMS's CGM program has recently undergone its first updating and streamlining since its introduction in 1980, and the changes have been made to take the program well into the foreseeable future.

These changes support the original idea of providing a peer review program to measure, evaluate, and attest to the key basic competence of a professional grounds manager. The intended result of the program is the protection of the public and potential employer, while strengthening the role of grounds management. The examination process and certification are open to all grounds managers. We at PGMS feel that the changes made will provide for a precise, updated, and improved program.

The changes are several, including:

- A complete reformatting of the manual from several books to one
- Introduction of a one-year time limit to complete the program
- A changed regimen and system of accreditation
- Adding the requirement to submit items for an accreditation's within 30 days of each occurrence

Preparation for Becoming a CGM

For those interested in becoming a Certified Grounds Manager, there is a very specific prescribed procedure. To qualify, an individual must meet the following requirements:

1. A Bachelor of Science degree (BS) in a recognized green industry field, including management, plus four years experience in the field of grounds maintenance, of which two years are of supervisory experience;

Or

2. A two-year Associates of Arts degree (AA) or equivalent degree from a four-year college or community college, plus six years experience in the grounds maintenance field with a minimum of three years of supervisory experience;

Or

3. Eight years in the grounds maintenance field with a minimum of four years of supervisory experience.

The examination process consists of two parts. Part one is administered by a proctor and covers a core of basic principles of grounds management, consisting of the following:

- Insects and diseases
- Soils
- Trees and shrubs
- Turfgrass
- Chemicals and fertilizers
- Management

A proctor administers an examination of 100 questions. The applicant taking the examination is required to answer these particular questions without referring to notes or reference materials. A minimum passing grade of 70 percent is required.

Part two of the certification examination is a newly revised take-home exam to be completed by the applicant, based on personal experience and the site or sites they maintain.

Upon successful completion of the Certified Grounds Manager program, CGMs will be required to be accredited every five years by compiling no less than 50 units. Accreditation units will be divided into two categories: Category one will be classified as Continuing Education Units (CEUs), and Category two will be classified as Professional Development Units (PDU's).

Application and examination fees for PGMS members are \$150. For nonmembers the fee is \$300. For more information on becoming a Certified Grounds Manager, please visit www.pgms.org or contact Professional Grounds Management Society, Suite 104, 120 Cockeysville Road, Hunt Valley, MD 21030; 800-609-7467. 📞

TOP TEN REASONS TO BECOME CERTIFIED

1. Certification Demonstrates Your Commitment to the Profession.

Receiving your certification shows your peers, and in turn the general public, your commitment to your chosen career and your ability to perform set standards. University degrees alone can no longer represent the full measure of professional knowledge and competence in today's evolving job market. Certification sets you apart as a leader in the grounds profession.

2. Certification Enhances the Profession's Image.

PGMS certification programs seek to promote and develop certified professionals, who can stand out in front as examples of excellence in the industry or field.

3. Certification Reflects Achievement.

Not only professional achievement, but also personal achievement. Becoming certified displays excellence in the field and fulfills set standards and requirements.

4. Certification Builds Self-Esteem.

PGMS certification creates a standard for our profession, complete with performance standards, ethics, and career paths. You'll begin to define yourself beyond a job description or academic level. You'll see yourself as a certified professional who can control your own destiny and find a deep sense of personal satisfaction.

5. Certification Establishes Professional Credentials.

Since it recognizes your individual accomplishments, certification stands above your resume, serving as an impartial third-party endorsement to your knowledge and experience. And when the industry looks for individuals qualified to perform services, they seek individuals—like you—who have achieved certification.

6. Certification Establishes Career Opportunities and Advancement.

Certification gives you the "edge" when being considered for a promotion or other career opportunities. It clearly identifies you as an employee who can adapt to changes in work, technology, business practices, and innovation.

7. Certification Prepares You for Greater On-the-Job Responsibilities.

Since certification is a voluntary professional commitment to an industry or field of knowledge, it is a clear indicator of your willingness to invest your own professional development. PGMS professionals are aware of the constantly changing environment around their profession, and possess the needed tools to anticipate and respond to change.

8. Certification Provides for Greater Earnings Potential.

As a certified professional, you can expect many benefits, but for today's downsized working world, salary increases speak for themselves.

9. Certification Improves Skills and Knowledge.

Ideally, achieving certification shows your individual competence by confirming proficiency and career involvement and assuring knowledge.

10. Certification Offers Greater Professional Recognition from Peers.

As a certified professional you can expect increased recognition from your peers for taking the extra step in your professional development. It will give your career and professional life a real boost.



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Membership Matters

Making the Most of Your Conference Experience

by Dina Murray

For those of you who will be attending the APPA's Educational Conference and 87th Annual Meeting, this is the time to network with other educational facilities professionals, visit with former colleagues and friends, and to expand your knowledge of an ever-changing profession. For those not attending, we will miss your presence in Fort Worth, Texas at both the social functions and educational sessions. The good news is that even if you will not be there in person you can still benefit from the conference experience.

The 2000 Conference Proceedings from Fort Worth will not be available as a printed publication this year, but instead will be available on the APPA website after the end of the meeting. Members will now be able to download a copy of the proceedings at no charge. The file will be located under the Education tab on the APPA website at www.appa.org. Presenting the proceedings through this medium will give more availability and accessibility to a group of facilities professionals who might not be able view the proceedings otherwise.

After reviewing the Proceedings, you also have the option of contacting a speaker on a topic that is of particular interest to you. Did you find a management tool or new guideline that would help you perform your job to a higher degree? Please call the APPA office and ask for contact information for a particular presenter. Your learning and growth potential

doesn't have to end in a meeting room.

If you are attending the Fort Worth conference, your annual meeting experience can be even more valuable by planning ahead. Since educational sessions may be concurrent, decide which one would be more beneficial to your particular work environment. Plan to get to sessions at least a few minutes before the start time to assure



a seat, as some sessions may be standing room only. By arriving early you are almost guaranteed a copy of any available handout. Yes, these things are common sense, but APPA wants to make sure that you get the most out of your conference experience.

Business Partner members too play an important role at the annual meeting. Whether making an educational presentation, exhibiting a product or service in the Hall of Resources, or sponsoring an event their presence is a unique chance for institutional members to benefit from their role as service providers to the educational facilities professional community. As event sponsors, Business Partners

demonstrate their commitment to the profession by providing financial support and building relationships with the institutional facilities community. These are excellent reasons to spread out your visit to the exhibit hall, now renamed the Hall of Resources, during the listed hours in the program. Show your support to APPA's Business Partner members as well as other exhibitors. Likewise, don't forget to express your appreciation to a Business Partner for a sponsored event that you particularly enjoyed.

As a conference participant your enthusiasm for APPA hopefully will remain high after your visit to Fort Worth. It will also be a great time to share your positive perceptions about the annual meeting with other educational facilities professionals and let them know about the benefits of APPA membership. To that end, please stop by the APPA booth and pick up some promotional materials and share the news that APPA is the association representing educational facilities professionals throughout the world.

Whether you're a first conference attendee or have been an attendee for years, I hope your APPA conference experience will be beneficial and rewarding to you. Please stop by the APPA booth or registration if you have any questions about your membership or if you just want to say hello to the APPA staff.

Finally, don't forget to pick up presenter and exhibitor information for APPA's 2001 Educational Conference and 88th Annual Meeting in Montreal, Canada at the APPA booth and registration as well as the Montreal booth. *Vous voir dans Montreal à la conférence de APPA!* 🏰

Dina Murray is APPA's director of member services. She can be reached at dina@appa.org.



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New Trends in Facility Asset Management

by Matt Adams, PE.

It has been more than two years since I last reported on new developments and trends in the arena of "facility portfolio management." I am pleased to reveal that there have been changes, and almost all of them are positive. While difficult to see on an institution-by-institution basis, our industry is growing in sophistication and prominence. One of the most positive messages in the field is that facility administrators have reached a new high in acceptance and involvement in the institutional financial planning process. This trend speaks to facility asset management as well. There are many new philosophies and policies being adopted by institution, system, state, and even national administrations that were originally initiated by facility administrators. This is a result primarily of two occurrences. After at least ten years of promotion and education by APPA and other groups, understanding and awareness of the ownership responsibilities associated with new facility construction has increased. In addition, the new "tidal wave" of students, or baby boomlets, has drawn attention

to the physical constraints and liabilities associated with facility portfolios.

Just like the "squeaky wheel," the large percentage of educational space delivered during the late 1950s and throughout the 1960s requires "oil." Now between 30 and 40 plus years old, this huge chunk of building stock is no longer just rife with deferred maintenance and grandfathered codes, it is obsolescent. It does not adequately support the educational mission any longer. This new physical reality can't



be explained away or ignored any longer. The important development is that non-facilities staff, administration, and faculty are now acutely aware of this issue. They see and experience it every day. This unlikely consensus-building process has demanded an explanation and new policies. No one wants this to happen again. Rather than saying, "I told you so," progressive facility professionals are using this increased sensitivity as a vehicle to introduce new policy and practices.

Under these circumstances, any new source of capital is well received.

As reported before, the best facility administrators in the country share a knack for looking in many directions for renewal capital. Few believe that traditional funding sources will satisfy the increasing renewal needs. Two years ago, only a handful of institutions had engaged in negotiated "performance contracts." Even fewer had engaged in supply contracts. This has changed, and the collective industry experience with this form of renewal finance is considerable. APPA, the Department of Energy, and the Environmental Protection Agency have sponsored the Resource Reallocation-Utilities Strategic Assessment (RR-USA) program for a year now.

This daylong briefing, held in seven states so far, has engaged a large number of energy performance contractors as well as facility administrators and business officers. The theme of the seminars is not the question of "if" performance contracts should be used. Instead, it is one of how institutions can "get to go." Two milestones have been reached so that this capitalization vehicle can succeed in this industry: there is a critical mass of solid, professional, and experienced performance contractors, and there is a good spectrum of institutions that have successfully engaged this form of renewal finance. It is not experimental any longer.

As evidenced in the RR-USA program, facility administrators are often working directly in partnership with the business officers of our institutions. This positive trend demonstrates that the two parties are

Matt Adams is president of The Adams Consulting Group, a management/engineering consulting firm located in Atlanta, Georgia, specializing in facility maintenance and management for higher education, school districts, and other institutions. He is a co-chair of APPA's Trades Staffing Guidelines Task force, and he can be reached at matt@adams-grp.com.

increasingly learning how to bridge what is often a technical terminology gap. In other words, engineering/architecture and maintenance priorities haven't always easily converted to financial management priorities, but there is a growing number of these improved "partnerships" within higher education institutions.

There is a clear perception and demonstration of support from the chief financial officer for facilities management. To achieve this, there is give and take on both sides. Facility managers have learned not to inundate financial planners with seemingly endless needs for capital with little accountability for its expenditure. For example, best practice facility auditing is no longer a process that produces thick reports outlining millions of renewal needs with seemingly no end in sight. More important than the shock value of report after report are scenario plans that illustrate the performance of various levels of capital investment. Specifically, the effects of capital investment packages are described in terms of the overall institutional support mission. This trend is described as a shift of emphasis from the creation of deferred maintenance data to the effective utilization of that data in various business planning processes. Facility administrators are separating themselves from the perception that capital renewal funding is a "black hole" with no end in sight. The new best practice illustrates a mutual understanding by facility administration as well as finance officers that "capital investments must perform."

There is positive activity in facility portfolio management further up the administration hierarchy. Landmark projects for facility capital budgeting have been completed or are in process at both the system- and statewide levels. Derrick Manns, the assistant to the vice president for academic administration at Madonna University, is completing dissertation work on the subject of statewide capital renewal policy. Working with APPA's Lander

Medlin to present to the Association of Institutional Research, Manns has identified several nationwide trends. Surveying all 50 states and their financial officers, Manns verified that utilization of new financing sources is on the rise.

The message to facility administrators is that the timing is right for alternative renewal financing proposals. Several states have demonstrated leadership in collecting and using facility renewal data: specifically Ohio, Illinois, Maryland, and North Carolina. Ohio utilizes performance funding measures to reward institutions based on achievement of certain operating and planning goals. On the other hand, there is a desire but not always the ownership of meaningful facility portfolio management data. Derrick Manns revealed that more than 85 percent of his survey respondents had plans to increase facility growth in anticipation of the "tidal wave II," while just under 50 percent had statewide coordinating plans for existing facility renewal. The stewardship message is now more relevant than ever.

There is a new understanding circulating in the industry regarding renewal funding. Eventually, funding for renewal and deferred renewal progresses into more expensive propositions. There are many examples of E&G space that has been "spent down" to levels that require constant reactive maintenance resources while yielding an unsatisfactory educational support service. This 1960s-era space is expensive to operate and it doesn't do the job. Sometime during the last 30 to 40 years, the accumulated deferred maintenance reached a point that exceeded the threshold of grandfathered codes. Deferred renewal eventually ages and exacerbates to trigger code compliance. Even when compliance is not required, wholesale system replacements often mandate code compliance from the institutional standard of care.

It is now recognized that after this long period of inadequate reinvestment

a third liability presents itself – functional obsolescence. The configuration and performance of this building stock is often no longer acceptable or competitive. Oddly enough, many of the "Generation Y" students entering college now complain that the classrooms and labs where they attend class are considerably below the standards of their grade schools. This revelation speaks to the entire facility whether intended or not. The basic design and system specification standards of this space have obsolesced and will no longer provide a return on renewal investment. Deferred renewal, code compliance, and functional obsolescence sum up a liability that typically exceeds 50 percent of the current replacement value. At this point, project-based renewal funding is non-productive. Limited renovations are more effective solutions to all three liabilities. More importantly, renovations offer more potential for funding sources.

I have visited many institutions that have a poor record for renewal funding. Despite this, space improvement is still achieved vis-à-vis multi-source funded renovations. The Department of English is not likely to find funds or gifts for a new chiller, but they may for renovation. We know that this is not the best strategy for facility stewardship, but it is one that does have a positive result.

Overall, the facility asset management practice is making good progress. The creativity and sophistication of the industry's leaders are growing. New sources of finance, both external and internal to the institutions, are increasingly utilized. Facility audits are more practical and communicative. The results of renewal investments are clearly defined and answer the question "what will happen if I fund this project." As two million additional students come to college during the next few years, the opportunity to influence facility stewardship policy is stronger than ever. ▲

Preparing for an EPA Inspection and Avoiding Common Mistakes

by Santo Manicone

Higher education

Facilities directors are well aware that complying with the government's environmental regulations is practically a full-time job for two employees. In addition to maintaining proper environmental records, training, reporting, disposal, and spills or releases of oil and hazardous substances, it is essential that facilities which produce, store, dispose of, and otherwise handle hazardous substances be prepared in the event that government officials conduct a site inspection of their operations. As we have all heard through the e-mail grapevine, the U.S. Environmental Protection Agency (EPA) is expected to enforce educational facilities through inspections as a means of getting into compliance by this aggressive program.

Well, is your facility ready for a minimum eight-hour EPA inspection? The best ways to answer this is by asking yourself these basic questions as honestly as possible.

- Do you have some documentation on the AMOUNTS and KINDS of hazardous waste you generate and on how you determined that they are hazardous?
- What is your U.S. EPA Identification Number?
- Do you ship hazardous waste off-site?

Santo Manicone is president of Facility Support Services LLC, a national environmental and safety engineering consulting firm with offices in Connecticut and Illinois. He has worked and assisted higher education facilities for over 16 years achieving federal and local compliance. He can be reached at support@snet.net.

- If so, by which transporter and to which designated hazardous waste facility?
- Do you have copies of MANIFESTS and Land Disposal Restriction Notifications used to ship your hazardous waste off site?
- Are they filled out correctly?
- Have the manifests been signed by all the transporters and the designated facility?
- Is your hazardous waste accumulated in the PROPER CONTAINERS?
- Are the containers properly DATED and MARKED?
- Have you designated an EMERGENCY COORDINATOR?
- Have you posted EMERGENCY TELEPHONE NUMBERS and the location of EMERGENCY EQUIPMENT?
- Are your EMPLOYEES trained and thoroughly FAMILIAR with proper waste handling and emergency procedures?
- Do you understand when you may need to contact the NATIONAL RESPONSE CENTER?

How did you score? For a number of us these questions, it will take some time and review to answer. In the case of an inspection, you do not have the time to look for these items; in fact you are responsible to make all these documents available for review during the inspection. If you hesitate to respond to these basic questions, then expect a long day of "inspector hell."

This edition of The Regulatory Reporter will try to assist you in preparing for an EPA inspection with some quick topics that will smooth the process. There are no assurances that you will pass all that the EPA asks, but I will expect that you will be prepared at least for the basics.

Benefits of the Inspections

As we are aware of, federal law provides the EPA with authority to inspect your site to evaluate your compliance with the hazardous waste regulations. It is important to cooperate with the EPA and use this unpleasant visit by an inspector as an opportunity to identify and correct problems (if needed). Accompanying inspectors on a tour of your facility will enable you to ask any questions you may have on more effective ways of handling your hazardous products and wastes.

In addition, guiding the inspectors through your facility and explaining your operations may help them to be more sensitive to the particular problems or needs of your business. Inspectors can also serve as a valuable source of information on record keeping, manifests, and safety requirements specific to your facility and can provide you with information that will help you reduce the amount of waste you generate.

Good Morning, I am an EPA Inspector

Government officials often provide prior notice of their intention to conduct an environmental inspection at the site. If prior warning is given, it is wise to request, in advance, that the inspector or inspection team provide you with a copy of any inspection checklists that will be used. This information will help you determine which areas of your facility will be inspected and what records the inspector will need to review for regulatory compliance. Regardless of whether advance notice is given, your facility should nevertheless have corporate policies and procedures in place to address various concerns about environmental inspections, including:

- Who should be involved in the inspection?
- Under what circumstances should access be denied?
- Whether opening and closing conferences should be required
- Whether the facility should give out copies of information
- Documents to be produced
- Sampling protocols
- Confidentiality issues
- Inspector's use of photographic equipment while on the premises

Each of these considerations should be thought out well in advance so that the facility is not taken by surprise, can exercise some level of control over the process, and ensure that its employees don't panic. In order to develop a good plan of action and corporate policy for handling environmental inspections, a facility must know its legal rights in regard to the government's inspection authority. Remember it is important to designate a director to greet government inspectors upon arrival on the premises. I have always asked these EPA officials to show identification, business cards and credentials, as well as have them sign a visitor's logbook.

First Tip: Avoiding Common Mistakes

The EPA has been conducting inspections on hazardous waste generators for facilities well over 15 years. Even today, inspectors frequently find that hazardous waste generators are often failing to comply with very similar requirements. Unfortunately, failing to comply with the hazardous waste requirements has resulted in financial penalties and legal notices. To avoid this type of enforcement response, hazardous waste generators can learn from the common mistakes and pay extra close attention to complying with these requirements.

Determine if your waste is hazardous waste

Federal regulations require that you determine if your waste is hazardous

waste using knowledge and/or testing (see 40 C.F.R. 262.11). This responsibility is fundamental to achieving compliance with other requirements. Inspectors will look closely at your facility to assure you have determined if all your wastes are hazardous or not.

Also, because your wastes need to be managed properly at all times even while you may be awaiting laboratory analysis, you must make this determination immediately upon generation of the waste. You can use process or historical knowledge to make this initial hazardous waste determination. You may also use simple test methods (litmus paper, flash point, etc.) while you await further laboratory analysis. It is okay to change your initial waste characterization to make it right. It is not okay to wait to make this determination. And don't forget to save the records used to make your determination.

Label and accumulate your waste properly

State and federal regulations require that large and small quantity generators label containers and tanks holding hazardous waste with the words "Hazardous Waste." You must also ensure that you do not exceed the accumulation times allowed for your generator category. Remember that generators may accumulate hazardous waste on-site without first obtaining a permit provided they comply with the labeling and accumulation requirements. If you fail to meet these accumulation and labeling requirements, you may be subject to an enforcement action based upon your failure to first obtain a permit—this is a very serious violation of the requirements. (See 40 C.F.R. 262.34. Please note that 40 C.F.R. 262.34 references many other regulations. It is very important that you comply with these referenced regulations.)

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Pollution Prevention can help in your Audit

Pollution prevention means eliminating or reducing at the source the use, generation, or release of toxic chemicals, hazardous materials, or solid waste. It requires a review of business activities from start to finish, in order to make changes that avoid the creation of waste, rather than managing waste after it has been generated. Pollution prevention is not the same as pollution control. Pollution control means reducing waste after it has been created, rather than avoiding its creation in the first place. Pollution prevention can increase operational efficiency. An emphasis on pollution prevention shows EPA officials that you run an efficient facility.

Improved Housekeeping

A preventive maintenance program that is written and has documentation will assist your facilities credibility with the inspector as having control. Preventive maintenance schedules should be reviewed periodically and incorporate a schedule to ensure that equipment is being maintained.

Examples of improved housekeeping procedures include the following actions:

- Inspect and maintain equipment routinely
- Perform preventive maintenance routinely
- Written or documented schedules

Hazardous Material Management

Hazardous waste storage areas are overlooked by a number of facilities. These areas are one of the first areas that the inspectors review. This entire room can set a major example on how the rest of the inspection will be performed. Good materials management practices include:

- Space rows of drums appropriately to allow for easy transfer and inspection for damage or leaks

- Stack containers according to manufacturer's instructions to reduce tipping, puncturing, or other damage
- Segregate each toxic substance, hazardous waste and non-hazardous waste to avoid cross-contamination, mixing of incompatible materials, and unwanted reactions and to facilitate materials exchange, recycling, or reclamation
- Store containers on pallets to prevent corrosion, which can result from containers making contact with concrete floors
- Add containment berms to capture and contain leaks or spills
- Keep aisles free of obstructions
- Clearly label containers with information on contents, handling, storage, expiration dates, and health and safety hazards

Written Spill and Leak Prevention

In the opening review of the EPA inspection a request to review your facilities spill plan will be needed. It is important that the spill plan be certified and that it has some of the basic topics. Such as:

- The location of storage tanks and vessels
- Emergency equipment location and description
- Contact names of responsible parties
- Emergency and spill contractors phone numbers
- Evacuation routes
- Employee training certification
- Inspection records

Denying Entry

If prior notification has not been provided, and the inspector shows up without a warning, the facility must determine whether it is worth giving the inspector a difficult time by denying entry since the inspector is certain to come back soon with the necessary warrant. Keep in mind that the inspector will surely be less congenial

upon his return. As I hear from a legal standpoint, denial of access to inspectors based solely on the lack of a warrant will not result in assessment of any civil or criminal penalties as long as an emergency situation does not exist. Access may also be denied for other reasons, including:

- The inspector lacks necessary safety equipment or has not undergone training required under OSHA or other federal laws
- The inspector is seeking entry other than during the working hours of the facility

If access is denied for one of these reasons, it is important that the inspector be told that access will be allowed upon compliance with the facility's objection. Access may not be denied for any of the following reasons:

- The inspector's use of cameras or video recorders
- Strikes or shutdowns
- The inspector's refusal to sign a waiver restricting liability or obligations of the facility owner or operator

On the other hand, if an inspector presents a valid search warrant upon arrival, and access is denied, the facility may be subject to criminal penalties. Therefore, it is crucial that designated personnel ask for a copy of the warrant and read it. Determine the scope and limits of the warrant.

To the extent that the warrant is limited to certain portions of the facility, the company may deny access to the remaining parts. Further, it is important to verify that 1) a magistrate or judge has signed the warrant and 2) the warrant authorizes entry by the agents who have appeared at the facility to conduct the inspection.

Other Tips

Overseeing the inspector's activities. It is important to keep a watchful eye on the inspector. The inspector should not be given carte blanche to peruse the facility and company files.

Company personnel should maintain a reasonable degree of control over the inspection process. The inspector should have an employee escort at all times so that the inspector does not go beyond the scope of the inspection as agreed upon in advance or provided by the terms of the inspection warrant.

Sampling and split sample requests. The inspection authority of most environmental laws permits the inspecting agency to perform sampling. If samples are collected, it is important to ensure that representative samples are taken and collected properly. The facility should always request a split sample and perform an independent sampling analysis to verify the accuracy of the government's sampling analysis. Under most environmental laws, inspectors are not required to provide split samples unless a specific request is made. When requesting a split sample, first make sure that the split sample is equal in weight and volume. The following additional information should also be obtained:

- Written receipts that describe the samples
- Description of the tests to be performed on the sample
- Government test results

Conclusion

Following completion of the inspection, the facility should request copies of all photographs and videotapes taken by the inspector, as well as receipts for samples and a document inventory. If documents are seized pursuant to a valid search warrant, the company is entitled to an inventory of the documents and the inspecting agency must file a copy of it with the court that issued the warrant.

The best way to be prepared for inspection is to perform your own compliance audits and "mock" EPA inspection program. Get started. 📌

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Book Review Editor: Dr. John M. Casey, P.E.

Managing facilities in higher education has at least two distinct drawbacks: knowing what to do is not intuitive, and learning what to do takes time. It is unfortunate that professionals in the facilities area of the academy are unable to unlock the secrets to these problems overnight. You and I did something similar, when we suddenly learned how to ride a bicycle; it only took a fall or two before we discovered our sense of balance. But running an institution's facilities takes more than just a few falls over a short period of time to understand exactly what to do. Colleges and universities are very complex organizational forms; each institution possesses unique characteristics and idiosyncrasies, which compound the problem of knowing how to manage facilities in an effective and efficient manner. Recall that there are, in the United States alone, more than 3,500 institutions of higher learning, and like snowflakes, no two are alike. Each school has a unique mixture of culture, mission, status, areas of expertise, and financial backing. This might suggest that a management course in higher education would consist entirely of 3,500 separate case studies, producing no clear conclusions regarding precisely how a school should be managed.

John Casey is manager of the engineering department of the physical plant division at the University of Georgia, Athens, Georgia. If you are interested in reviewing a book for The Bookshelf, contact Casey at jcaseype@arches.uga.edu.

Recent events, however, have forced facilities managers to try to make order out of this chaotic mix of forces which mold each institution's identity. The current assessment movement, while principally focussed on academic programs, student outcomes, research projects and public service programs, uncovered a gap in



this attack on the Academy's credibility. Prior to the development of APPA's Strategic Assessment Model (SAM), there was no instrument available to attempt to measure the effectiveness of a facilities program in an institution of higher education. Clearly, our profession needs to take advantage of all our collective resources, especially existing information, and promote continuing professional education, so that we can understand and utilize SAM to improve our effectiveness and efficiency.

Regarding existing information, long before SAM and *Facilities Manager* existed, APPA was publishing information to assist facilities managers in their efforts to make a sweet drink out of tart citrus fruit. The width and breadth of these publications is impressive. The

information and advice contained in these works is more than sufficient to prepare every manager for a successful career – provided, of course, that the works are first read, and are then used to implement appropriate action. Unfortunately, not everyone who should does this; a prime example of one who failed to take advantage of this wealth of information is this writer. I suggest that all APPA members resolve to pay careful attention to the literature and educational programs sponsored by our professional organization.

Of all this information published by our association, two stand out in my mind as representing the essence of our commitment to excellence in facilities management. These two sets of publications – *The Minutes/Proceedings* of our annual meeting, and *Facilities Management: A Manual for Plant Administration*—are reviewed below. Both publications are available from APPA through the website at www.appa.org.

—JMC

Minutes/Proceedings

In 1926, E.C. Pardon of the University of Michigan hosted the 13th meeting of APPA (then called the Association of Superintendents of Central Western Colleges and Universities) in Ann Arbor, Michigan. The minutes of that meeting, complete with a group photograph of the attendees, is the oldest set of minutes available in the APPA archives. In this first known summary of events at the annual meeting are discussions on utility costs, purchasing of fuel, outsourcing of certain functions, operation and maintenance costs for different types of campus buildings,

worker training, parking, and keys. Seventy-five years later, we are all still struggling with these very same problems. Thus, the *Minutes of the Annual Meeting*, later (starting in 1973) called the *Proceedings*, form a vital resource for information concerning how to operate a physical plant in a college or university. Note that the topics concerned are just as important on the shores of Lake Sebago as they are on the shores of Lake Mendota or the shores of Lake Washington, and all stops in between. The *Minutes/Proceedings* highlight current problems for everyone in the facilities management arena of higher education, as presented by practitioners and critiqued by their peers.

A review of these publications over the years produces prescient works which, if recognized at the time and implemented immediately, would have resulted in significant improvements in our profession. Examples of such include discussions on "Principles of Management" (1935), "Depreciation and Maintenance of Buildings" (1936), which presented the "sum-of-years digit" method for using age and building type to predict maintenance requirements, "The Possibilities of Air Conditioning as Applied to Colleges and Universities" (1937), "Design of College Buildings" by the Dean of the Harvard School of Design (1938), "Fire Prevention" (1939), and so on through the years. Articles by this writer appeared in the *Proceedings*, including "The Impact of Genetic Engineering on Physical Plant Administrators" (1980), and "The Impact of Installing a New Telecommunications System on Physical Plant Administrators" in (1984). Subsequently, more recent articles have covered every topic and "hot button" problems affecting our profession.

With the exception of 1943, when no national meeting was held due to World War II, and the 1991 Meeting in Orlando, Florida, when budget restraints cancelled formal publication

of the *Proceedings*, this information has been available yearly to APPA members since 1926. Starting this year, the *Proceedings* will be published exclusively online, made available to all without charge on APPA's website. Thus, the 1999 *Proceedings* mark the end of an era, passing from formal printed publication to electronic form. According to Editor Steve Glazner, the change to

electronic form was precipitated by the decline in the number of formal written text papers. These have been gradually replaced by the current practice of meeting presentations made with software similar to PowerPoint, which is animated and difficult to replicate on the printed page.

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**Facilities Management: A Manual
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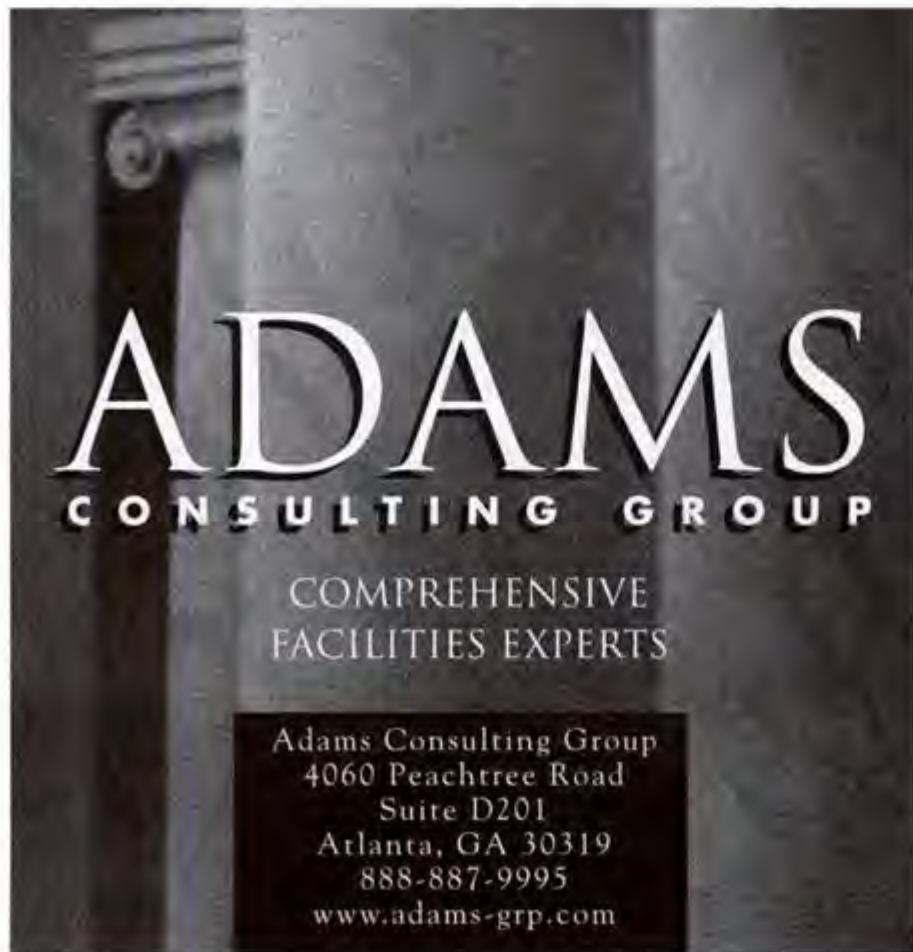
APPA has thus far published four editions of two handbooks for facilities professionals. The first book, *A Basic Manual for Plant Administration* (1974) was edited by George Weber, who passed away in May. Weber represented the University of Maryland/College Park and was President of our organization in 1970. Rex Dillow, from the University of Missouri/Columbia and APPA interim executive director in 1985, edited the first and second editions of the *Facilities Management* manual in 1984 and 1989, respectively. William Middleton of the University of Virginia, and APPA President in 1990, edited the latest edition in 1997. The current work features 67 chapters covering 1,750 pages; 74 authors contributed to the four-book publication.

It would be a glaring understatement to report that our manual is merely a useful guide for facilities professionals in higher education. This work is, in fact, the most complete and well-written manual for our profession available anywhere at any price. Contributing authors have "been there and done that," and they reported the results of their experiences with diverse topics for all readers to share. Each volume covers one of the four general topics: General Administration and Management, Maintenance and Operation of Buildings and Grounds, Energy and Utility Systems, and Facilities Planning, Design, and Construction. Acknowledged experts such as Dr. Harvey Kaiser (Capital Renewal, Deferred Maintenance, Facilities Condition Assessment), and Dr. Mohammed Qayoumi (Financial Analysis, Building Electrical Systems, Regulatory

Issues for Utility Plants, Electrical Distribution Systems) lead the list of authors of important chapters. There is in this handbook, literally, everything you ever wanted to know about our profession.

Each APPA member is encouraged to obtain and review carefully the topics in both *Minutes/Proceedings* and *Facilities Management: A Manual for Plant Administration* that affect his or her institution. If you do not find helpful information in these works, send me a letter or e-mail stating what information you need. I will be happy to point out where in APPA's body of literature that the information is printed. Believe me, it is in there somewhere.

Dr. John M. Casey, P.E.
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From Jack C. Dudley, PE, APPA Member Emeritus, Editor and Co-author of the APPA: Association of Higher Education Facilities Officers publication *Custodial Staffing Guidelines for Educational Facilities*, first edition and Co-author of the second edition. Software uses methods developed for the book.

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Coming Events

APPA Events

For more information on APPA seminars and programs, visit our website's interactive calendar of events at www.appa.org/news/.

Sept 17-21 - Institute for Facilities Management

Pittsburgh, PA.
Contact: Andria Krug at 703-684-1446 or andria@appa.org.

Jan 28-Feb 1 - Institute for Facilities Management

Newport Beach, CA.
Contact: Andria Krug at 703-684-1446, ext. 230 or andria@appa.org.

Feb 12-13 - The Emergent Building Technologies Conference:

Integrating People, Technology, & Design. Las Vegas, NV. Sponsored by APPA, CSI, & NSCA. Contact: Construction Specifications Institute at 800-689-2900 or visit www.emergentbuildingtech.com.

July 22-24, 2001 - APPA Educational Conference & 88th Annual Meeting

Montreal, Canada.

Contact: Andria Krug at 703-684-1446, ext. 230 or andria@appa.org.

July - APPA 2001 Educational Conference & 89th Annual Meeting

Phoenix, AZ. Contact: Andria Krug at 703-684-1446, ext. 230 or andria@appa.org.

APPA Regional Meetings

Sept 22-26 - CAPP 2000 Regional Meeting

Overland Park, KS.
Contact: Robin Boley at 913-469-3821 or rboleay@jccc.net or John Skubal at 913-469-3810 or jskubal@jccc.net.

Sept 23-26 - RMA 2000 Regional Meeting

St. George, UT. Contact: Craig Bohn at 801-581-5609 or cbohn@campplan.utah.edu.

Sept 24-27 - AAPPA/ATEM Annual Conference

Melbourne Conference Centre, Melbourne, Victoria, Australia. Contact: Denis Stephenson at 613-9479-2077 or D.Stephenson@latrobe.edu.au.

Oct 1-3 - PCAPPA 2000 Regional Meeting

Long Beach, CA. Contact: Hildo Hernandez at 818-677-2325 or hildo.hernandez@csunn.edu.

Oct 7-10 - SRAPPA 2000 Regional Meeting

Nashville, TN. Contact: Sam Polk at 615-963-5687 or spolk@picard.instate.edu.

Oct 8-11 - MAPPA 2000 Regional Meeting

Ann Arbor, MI. Contact: Valerie Amo at 734-764-3400 or vamo@umich.edu.

Oct 8-11 - ERAPPA 2000 Regional Meeting

Burlington, VT. Contact: Tim Pedrotty at 802-654-2398 or tpedrotty@smcvt.edu.

Other Events

Aug 20-25 - Efficiency &

Sustainability. Pacific Grove, CA. Contact: Rebecca Lunetta, American Council for an Energy-Efficient Economy at 302-292-3966 or rlunetta@erols.com.

Aug 21-23 - Energy 2000

Pittsburgh, PA. Contact: Energy 2000 at 800-395-8574.

Aug 24 - Hazardous Materials

Handling Certification for DOT 49 CFR Transportation Regulations. Chattanooga, TN. Contact: Environmental Resource Center at 800-537-2372, ext. 222 or service@ercweb.com.

Sept 12-Dec 11 - EEMP Lights

Distance Learning Course 2000. Lynnwood, WA. Contact: Edmonds Community College at 425-640-1010 or Jon McHugh at 916-962-7001 or mchugh@h-m-g.com.

Sept 13-16 - The National Association of Women in Construction Annual Conference

Reno, NV. Contact: NAWIC at 817-877-5551 or nawic@onramp.net.

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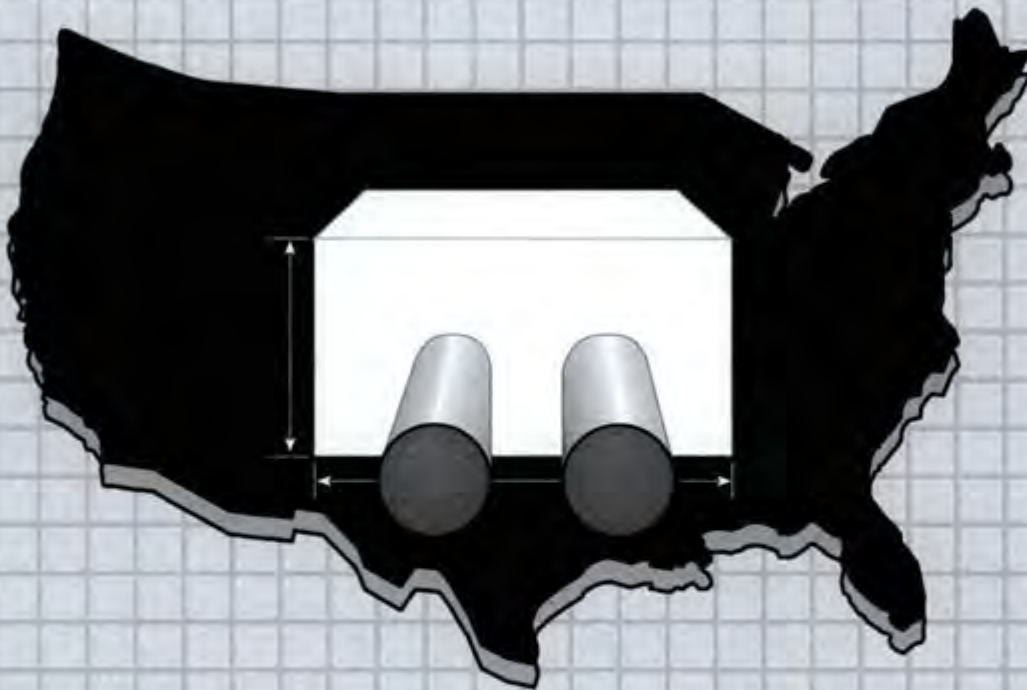
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The FAMIS Asset Enterprise is based on pure Oracle technology and supports Windows, Windows95/NT, Macintosh and Power Macintosh.

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