

The official publication  
of the Association  
of Physical Plant  
Administrators of  
Universities and Colleges

# Facilities Manager

Volume 5 Number 4

Winter 1989

**Merging Your Goals for Excellence  
With the Institution's Mission**

**Also in this issue:**

- Visioning
- Safety Officer at a Small Campus
- Electrical Centrifugal Chillers



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# APPA UPDATE

NEWS FROM THE ASSOCIATION OF PHYSICAL PLANT ADMINISTRATORS OF UNIVERSITIES AND COLLEGES

## Higher Education Commissions Focus on CRDM

APPA may be directly affecting outcomes in its campaign to restore the "decaying american campus" as state commissions invite APPA to make presentations on the issue of capital renewal/deferred maintenance. "I don't believe we have a parallel in APPA's 76-year history," commented Jack Hug, APPA President, referring to recent workshops conducted by APPA at the invitation of state higher education groups.

Most recently, on November 14th in Montgomery, Alabama, an audience of more than 100 persons heard a series of perspectives on conditions of campus facilities in their state. Sponsored by the Alabama Commission on Higher Education (ACHE), the "Conference on Capital Needs" was attended by the presidents of every state senior institution, legislators, business officers, and facilities directors, among others.

Walter Schaw, APPA executive vice president, and Sean Rush, director of higher education consulting services, Coopers & Lybrand, opened the meeting with findings from national research and applications to Alabama. A series of perspectives on campus facilities were offered by the commission from Dr. Joseph Sutton, executive director; from the business community, by Winton Blount; and from the institutions by the presidents, James Martin, Auburn; Phillip Austin, University of Alabama Systems; Fred Gainous, Postsecondary Education; and Asa Green, Livingston University.

A backlog of \$539 million in deferred maintenance, including \$174 million in "urgent needs," was described by Sutton. Cushing Phillips, ACHE consultant, projected a backlog "in excess of \$1.1 billion" by the end of the century at the present rate of deterioration.

Schaw endorsed the ACHE formula, which proposed state funding for capital renewal at about 2 percent of a \$4 billion replacement value, and recommended that the legislature annually fund the formula beginning in 1990. This funding, he warned, would not reduce backlogs, but would prevent a worsening in the level of deterioration. Blount, spokesperson for the business community, endorsed such

funding as an Alabama priority.

The program also included case studies, recommended by APPA as highly relevant to Alabama's higher education facilities needs. Carson Smith, vice president for business affairs, Kentucky State University, described how a consistent reserve for facilities renewal must be maintained. Brenda Albright, deputy director of Tennessee's Higher Education Commission, reported her state's success with the commission coordinating audits of facilities conditions and consistent state appropriations that resulted.

"I was particularly pleased with the very positive comments from the presidential panelists and by the significant endorsement by Blount on behalf of Alabama business," commented Schaw. "It would be premature to project the outcome," he said, "but we did our job in setting the stage and getting a focus by the leadership on campus facilities conditions."

Tim Vick, staff associate for the Alabama commission and an APPA member, reported an extremely positive response from legislators and presidents. Green, chair of the Alabama Council of Presidents, called the APPA presentation "very effective" and "gave credibility to the presentation of our needs here in Alabama."

Media coverage of the event included Alabama public television interviews of Taylor Harper, chair of the state legislature's Ways and Means Committee, as well as Schaw and Sutton. All major daily newspapers also featured articles on the event. Stanley Drake, APPA member and assistant vice president for facilities at Auburn University, reported "a new willingness by the Alabama legislature to address facilities deficiencies in higher education as a result of the conference."

The Alabama conference was preceded in APPA's new state initiatives by a workshop sponsored by the Texas Higher Education Coordinating Board last August in Austin. An emphasis of this workshop, conducted by Schaw, Rush, Smith, and Albright, was the need to define facilities conditions by audits as a first step. The board was encouraged to fund facilities

condition audits in order to present comprehensive detail for state appropriations for renewal and deferred maintenance. Landrum Hickman, Texas board associate, reports a "more intense interest and an encouragement for state funding."

Four other states have now initiated inquiries with the APPA office, primarily from education commissions, but also from state councils for private institutions of higher education. "We may have a tiger by the tail," reports Schaw, "but when we have the kind of interest we have by higher education's leadership, we're going to make the most of every opportunity. APPA can make a real difference in the future condition of campus facilities. It's the payoff of a lot of work already done."

The APPA/NACUBO Executive Briefings on "The Decaying American Campus" will continue on February 26-27 in San Francisco. As in the briefing recently held in St. Louis, new findings and case histories are being introduced into course content to expand the dimensions of APPA's CRDM knowledge base. A program brochure will be mailed in early January.

## Wassenar Surveys Physical Plants

Winthrop Wassenar, director of physical plant at Williams College (MA) and current Fulbright Fellow, completed a series of consultations at twelve institutions in coordination with the Association of American Colleges. While on sabbatical from Williams, Wassenar visited campuses to address the state of their physical plant administration, staffing, contracts, heating and cooling systems, libraries, building structures, laboratory facilities, and other areas, according to the September/October *Liberal Education* magazine. Since Wassenar realized hiring a consultant can be especially burdensome to small colleges, he did not charge the schools for his expertise. Wassenar surveyed the current condition and gave recommendations for the various areas. The

(cont. on p. 4)



# Inside APPA

(cont. from p. 3)

schools visited were: Bennett College (NC), Bennington College (TN), Berea College (KY), Cumberland College (KY), Kentucky State University, Lees College (KY), Lees-McRae College (NC), Lincoln Memorial University (TN), Maryville College (TN), Morris Brown College (IA), Shenandoah College & Conservatory (VA), and University of the South (TN).

## Institute Scholarships Awarded

The following individuals were awarded scholarships for the 1990 January and August Institutes. The scholarship, partially funded by HEFT, covers the registration fee for the conference. Many regions award one scholarship for each session of the Institute. In addition, several regions and chapters also support scholarships to give more individuals the opportunity to attend the Institute.

### January

#### Eastern

Nancy Bennett, University of Vermont

#### Southeastern

Patty Galmiche, Clemson University (SC)

#### Midwest

Peter Sandberg, St. Olaf College (MN)

#### Central

Rock D. Morille, Baylor College of Medicine (TX)

#### Rocky Mountain

William S. Rose, Montana State University

#### Pacific Coast

Ted Morgan, Northwest Nazarene College (ID)

### August

#### Eastern

William L. Glenn Jr., University of Maryland Baltimore County

#### Southeastern

Brendan Bowen, Western Kentucky University

#### Midwest

John Haley, Indiana State University

#### Central

David W. Castilow, University of Nebraska at Omaha

#### Rocky Mountain

Not yet selected

### Pacific Coast

Donald E. Thornberry, Occidental College (CA)

## Regional and Chapter Awards

### Eastern

Robert P. Failla, Essex County College (NJ)—January

### Southeastern

Thomas Horn, University of North Carolina/Chapel Hill—January

Richard W. Gell, Millsaps College (MS)—August

### Midwest

John Paulsen, Wittenberg University (OH)—January

Debra G. Schlarb, Northern Illinois University—January

### Central

William N. Tam, Saint Mary's University (TX)—January

Richard Ullmann, William Jewell College (MO)—January

Neal R. Swarnes, Cottey College (MO)—January or August

### Rocky Mountain

Heinz G. Butt, Arizona Western College—January

Maryland-District of Columbia Chapter  
Sherell L. Baker, University of Maryland at Baltimore

## OSHA Works on MSDS

OSHA has been criticized by labor unions and Congress for the language used in their hazard communication standard material safety data sheets (MSDS). According to October 20 *CUPA News* Senator Dale Bumpers (D-AR) asked OSHA to evaluate the "standard with emphasis on hazard determinations and worker comprehensions of MSDS information." OSHA will take a look at the sheets to see if they are not comprehensible to the average worker, one that does not have a science background.

## Scholarships Available From Parking Institute

The Parking Industry Institute, a Foundation of the National Parking Association, has an interest in supporting educational opportunities of its membership, their employees and dependents. To serve this interest they have developed a scholarship program to assist students with demonstrated financial need to defray their college expenses, recognize and assist academically talented students to at-

tend the institution of their choice, and provide financial aid to support the National Parking Association's commitment to advance educational opportunities.

These yearly scholarships are granted in amounts from \$500 to \$2,000. Applicants may apply for renewal. Applications must be submitted to the Trustees of The Parking Industry Institute no later than March 1, 1990. For more information contact the Parking Industry Institute, 1112 16th Street, N.W., Suite 300, Washington, DC 20036.

## Environmental Series Upcoming in Magazine

During 1990, *Facilities Manager* will be taking an in-depth look at some of the most pressing environmental issues currently facing facilities managers. The spring issue will carry an article covering PCBs, followed by asbestos, waste management/recycling, and hazardous waste. If anyone has developed innovative funding programs or ways to handle environmental legislation and rulings, please contact Stephanie Gretchen, APPA, 1446 Duke Street, Alexandria, VA 22314; 703/684-1446, fax 703/549-2772.

## Member News

Frederick Brenner, manager of grounds at the University of Michigan at Dearborn, was presented the Certified Grounds Manager plaque at the Green Team Conference and Trade Show in St. Louis, Missouri in November 1989. This program is designed to upgrade the professional and bring recognition of professionalism in the field. To earn this award an individual must be approved by the certification committee, take an examination, and complete several booklets on grounds management.

**APPA Update** appears in each issue of *Facilities Manager* and features news from the Association of Physical Plant Administrators of Universities and Colleges. APPA is an international association, founded in 1914, whose purpose is to promote excellence in the administration, care, operation, planning, and development of higher education facilities. **APPA Update** is compiled and edited by **Stephanie Gretchen**.



# Inside APPA

## Animal Research Ruling Updated by USDA

Although thousands of comments were received, the U.S. Department of Agriculture's Animal Welfare Act final rule changed little from its original. The USDA amended part 1 of this act in order to "update, clarify, and expand the list of definitions of terms used in parts 2 and 3 of the regulations," according to the Federal Register volume 54, number 168. This was done to help facilitate the public compliance with the act and the enforcement. The rule became effective October 30, 1989. For further information contact Dr. Dale F. Schwindaman, REAC, APHIS, USDA, Room 206, 6505 Belcrest Road, Hyattsville, MD 20782; 301/436-6491.

## Safety Award Offered

The National Safety Council and the Campus Safety Association are offering colleges and universities an opportunity to evaluate, improve, and share their safety programs through the National Campus Safety Award Programs.

This award recognizes excellence in a complete safety program. The submitting institution receives the reviewers' comments and suggestions for improving their safety program.

This organization also offers an award program for excellence in campus safety newsletters. This award is offered to encourage campuses to provide newsletters to employees, faculty, and/or students as part of their safety program.

The deadline for both the National Campus Safety Program Award and the Campus Safety Newsletter Award of Excellence is February 15, 1990. Entrants must be members of the Campus Safety Association of the National Safety Council.

• • •

*Is your institution experiencing major personnel changes or undertaking special activities? If so, please send them to us for possible inclusion in the newsletter. Send all items to Stephanie Gretchen, Editor, APPA Newsletter, 1446 Duke Street, Alexandria, VA 22314-3492; 703/684-1446, fax 703/549-2772.*

# Coming Events

## APPA Events

Contact the APPA Educational Programs Department at 703/684-1446.

Feb. 26-27—Capital Renewal/Deferred Maintenance Workshop. San Francisco Airport Hilton, San Francisco, CA.

Feb. 26-27—Hazardous Waste Management. Cambridge Marriott, Cambridge, MA.

Jul. 1-4—APPA 77th Annual Meeting. Ottawa, Canada.

## Other Events

Feb. 1—Aboveground Storage Tanks Course. Denver, Colorado. Contact: Government Institutes, Inc., 966 Hungerford Drive, #24, Rockville, MD 20850-1714; 301/251-9250.

Feb. 6—The One Minute Manager Meets the Monkey. Washington, DC. Contact: Daniel Management Center, College of Business Administration, University of South Carolina, Columbia, SC 29208; 803/777-2231; fax 803/777-4447.

Feb. 7—How to Communicate with More Power. Washington, DC. Contact: Daniel Management Center, College of Business Administration, University of South Carolina, Columbia, SC 29208; 803/777-2231; fax 803/777-4447.

Feb. 12-13—Heath Water Leakage Control and Pipe Locating Seminar. Williamsburg, VA. Contact: Heath Consultants Inc., 100 Tosca Drive, P.O. Box CS-200, Stoughton, MA 02072-1591; 800/HEATH-US (432-8487).

(cont. on p. 11)

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## Meet the Board

In order to familiarize the APPA membership with your Board of Directors, we included a photograph and background information about each Senior Representative last month, and this month we feature the Junior Representatives.

### Junior Representatives

#### Donald L. Hedrick

Eastern Region  
Director of Physical Plant  
Allegheny Community College  
Cumberland, MD  
301/724-7700  
FTE: 1,679

Years as APPA member: 8

Served in all chairs at chapter level, some twice. Served at regional level in all chairs, except treasurer. Serving second term as Eastern Region president. Served on regional and international host committees.

#### W. Clay Adamson Jr.

Southeastern Region  
Director of Physical Plant Division  
Medical College of Georgia  
Augusta, GA  
404/721-3477  
FTE: 1,800

Years as APPA member: 12

Earned an associate degree from South Georgia College, a bachelor's degree in landscape architecture and a master's degree in landscape architecture from University of Georgia. Worked as assistant Fulton County Planner, Atlanta, GA, 1960-65; landscape architect for University System Board of Regents, Atlanta, GA, 1965-1968; director of physical plant division, Medical College of Georgia, 1968-present. Served as chair for APPA Medical College Committee; past president for Southeastern Region; past president and program chair for Georgia Association of Physical Plant Administrators; University of Georgia Alumni Association Steering Committee; University of Georgia School Environmental Design Committee; and the University of Georgia Trust Committee. Member of American Society of Landscape Architects, Georgia Association of Landscape Professionals, Georgia APPA, NACUBO Business Officers, Exchange Club of Augusta-Board of Directors, MCG Presidents Club, MCG Founders Club.

#### Rocky A. Mediate

Midwest Region  
Director of Facilities Management  
Youngstown State University  
Youngstown, OH  
216/742-3238  
FTE: 10,715

Years as APPA member: 13

Earned a degree in mechanical engineering from Youngstown State University. Served as president and now past president of the Midwest Region. Limited service instructor in engineering technology department at Youngstown State University.

#### Herbert I. Collier

Central Region  
Executive Director of Facilities  
University of Houston/University Park  
Houston, TX 77004  
713/749-4840  
FTE: 32,000

Years as APPA member: 14

Earned a BS in civil engineering and a master's in business administration from Louisiana State University; earned Professional Engineering license in Louisiana and Texas. Worked as Parish County Engineer, 1964-1966; assistant director of physical plant at Louisiana State University, 1966-1974; director of physical plant at Louisiana State University, 1974-1982; director of physical plant at University of Houston, 1982-present. Taught introduction to business part time in fall 1977 at Louisiana State University. Served as APPA educational programs vice president, president-elect, president, and as a board member since 1981; president of Southeastern Region; president, first vice president, and second vice president for the Central Region. Recipient of APPA's Meritorious Service Award and President's Award. Member of the Rotary Club of Houston, First United Methodist Church, Phi Kappa Phi, and Tau Beta Pi.

#### William S. Mutch

Rocky Mountain Region  
Financial Officer, Physical Plant  
University of Calgary  
Calgary, Alberta, Canada  
403/220-7555



Collier



Mutch



Naretto

FTE: 20,650

Years as APPA member: 10

Early education and training, through the Institute of Cost and Works Accountants and the British Institute of Management, were obtained in Scotland prior to emigration to Canada in 1960. First a student member, and currently a registered member of the Society of Management Accountants of Alberta and Canada, then received CMA designation (Certified Management Accountant) in 1966. Served as past director of the Calgary Chapter of the Society of Management Accountants, serving one year as program chair and one year as secretary. Employed by University of Calgary for the past 23 years, prior to which he worked in the meat packing, chemical, and petro chemical industries in finance/accounting related positions. Served as APPA treasurer, Executive Committee member, and chair of the Budget and Finance Committee from 1986-89; recipient of APPA's Meritorious Service Award. Hosted Rocky Mountain Regional Annual Meeting in Calgary, 1988; served as president of Rocky Mountain Region, 1988-89; serving as APPA Junior Representative from Rocky Mountain Region and a member of the Budget and Finance Committee.

#### Ed Naretto

Pacific Coast Region  
Director of Plant Operations  
California Poly State University  
San Luis Obispo, CA  
805/756-2321  
FTE: 15,700

Years as an APPA member: 10

Earned a BS in mechanical engineering from Cal Poly, 1967. Worked as project engineer at Dow Chemical Company, 1967-72; director of physical plant, Central Michigan University, 1972-1979; director of plant operations, Cal Poly, 1979-present. Member of ASHRAE, PCAPPA Budget and Finance Committee. Graduated from APPA Institute, 1976. Serving as past president of PCAPPA, PCAPPA junior representative. Attended and made presentations at the first Australasian APPA meeting at Griffith University, Australia.



# The Environment



Facts On File collected information on **hazardous chemicals**, including knowing which chemicals are hazardous and at what levels, cleaning up spills, disposing of waste materials, avoiding safety violations, ensuring environmental safety, providing proper treatment for employees exposed to dangerous chemicals, and complying with federal, state, and local safety laws and regulations. For more information or to order *Hazardous Chemicals On File*, contact Facts On File, Inc., 460 Park Avenue South, New York, NY 10016; 800/322-8755, or call 212/683-2244 collect.

**Seminars and short courses** on asbestos, underground storage tanks, and other environmental and occupational safety issues are being offered by the University of Kansas Division of Continuing Education. These courses are designed to help employees sort out compliance requirements. The February, March, and April offerings range from OSHA Hazard Communication Standard, to Asbestos Inspector/Management Planner Refresher, to Environmental Regulations Update, to Hazardous Waste Site Operations. For more information contact Lani Himegarner, Program Manager, Technical, Environmental, and Management Program, 6600 College Boulevard, Suite 315, Overland Park, KS 66211; 913/491-0221.

The Pacific Asbestos Information Center (PAIC) has announced its schedule of courses for spring 1990, encompassing subjects required for continuing education and training under EPA's **ASHERA** regulations, as well as additional courses on **asbestos** identification, regulation, and management. PAIC is one of five regional training centers opened in 1986 under an EPA grant. It is now a division of Programs in Environmental Hazard Management, a new department at UC Berkeley Extension, the continuing education branch of the university. Evening classes and short courses are offered in the San Francisco Bay area from January through

May. For more information contact Programs in Environmental Hazard Management, University of California Berkeley Extension, 2223 Fulton Street, Berkeley, CA 94720; 415/643-7143; fax 415/643-8683.

Indoor plants may be part of a solution to **indoor air quality** complaints. The National Aeronautics and Space Administration (NASA) conducted a study that revealed that common office and house plants absorb potentially hazardous gases from the air. According to the fall 1989 *Alliance* magazine, both the leaves' photosynthesis and the root system remove pollutants. The study showed how "common office and house plants like the Spider Plant, Philodendron and Golden Pothos can reduce indoor pollutant levels in sealed experimental plexiglass chambers by 80 percent in a 24-hour period. Four to five potted plants can purify a 12-by-12 foot room of average air quality," according to *Alliance*.

There seems to be a good deal of activity on the **asbestos** front. The EPA is

working on a new ruling due to come out in 1990. At present, when doing any work with asbestos, following EPA's standards for proper notification, practices, and waste disposal is of utmost importance. The National Emission Standards for Hazardous Air Pollutants (NESHAP) hold both the owner of the building and the contractor responsible for all asbestos actions. This is important to keep in mind since fines can be up to \$20 per foot and more, depending upon the gravity of the situation. In addition to notification, practices, and waste disposal, the new ruling will include standards on record keeping.

Less than a year away, the October 1, 1990 **PCB Fire Rule** deadline is approaching. This regulation requires anyone with a PCB network higher secondary voltage transformer in or near a commercial building must be removed, reclassified, or have electrical protection. There is also the Manifest Rule that will be coming out within the next few months that will regulate PCB tracking from the cradle to the grave. For more information contact EPA TSCA at 202/554-1404.

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# Membership

## New Institutional Members

**Alabama State University**, P.O. Box 271, Montgomery, AL 36101; 205/293-4000. Representative: Robert L. Jones, director of physical plant.

**Anderson College**, 316 Boulevard, Anderson, SC 29261; 803/231-2000. Representative: Olin Padgett, director of physical plant.

**Austin Community College**, P.O. Box 2165, Austin, TX 78702; 512/495-7000. Representative: James Adams, physical plant director.

**Baldwin-Wallace College**, 195 East Center Street, Berea, OH 44017; 216/826-2235. Representative: Thomas E. Reeder, director of facilities.

**Cegep Lionel-Groulx**, 100, Rue duquet, Sainte-Therese, Quebec, Canada; 514/430-3120. Representative: Yvon Crevier, director.

**Central Piedmont Community College**, Ingate Street, Wake Forest, NC 27587; 919/556-3101. Representative: Bradley W. Chappell, director of plant services.

**Doane College**, 1014 Boswell, Crete, NE 68333; 402/826-8200. Representative: Pappy Khouri, vice president for finance.

**Elms College**, 291 Springfield Street, Chicopee, MA 01013; 413/594-2761. Representative: Peter G. Mascaro Jr., physical facilities director.

**Hong Kong University of Science and Technology**, 12/F World Shipping Centre, 7 Canton Road, Kowloon, Hong Kong; 852/3021435. Representative: Michael Hudson, director of estates management.

**Jefferson State Junior College**, 2601 Carson Road, Birmingham, AL 35215; 205/853-1200. Representative: Larry Thompson, director of physical plant.

**Loras College**, 1450 Alta Vista, Dubuque, IA 52004-0178; 319/588-7132. Representative: Al Brinkmoeller, superintendent of buildings and grounds.

**Mississippi College**, P.O. Box 4046, Clinton, MS 39058; 601/925-3370. Representative: Sim Worley, director of physical plant.

**Meredith College** Hillsboro Street, Raleigh, NC 27611; 919/829-8600. Representative: Allen C. Suttle,

environmental services manager.

**North Iowa Area Community College**, 500 College Drive, Mason City, IA 50401; 515/421-4220. Representative: Robert E. Church, vice president, administration.

**Spring Hill College**, 4307 Old Shell Road, Mobile, AL 36608; 205/460-2121. Representative: John R. Peavy, director of plant services.

**Texas Wesleyan University**, 904 Col-lard, Fort Worth, TX 76105; 817/531-4454. Representative: Ronnie Ervin, director of physical plant.

**University of La Verne**, 1950 Third Street, La Verne, CA 91750; 714/593-3511 ext. 4341. Representative: Brian Worley, superintendent of buildings and grounds.

**University of Western Sydney**, Burke Street, Richmond, N.S.W., Australia; 045/783550. Representative: Robert K. Snedden, manager, works and properties.

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**Dordt College**, Sioux Center, IA: **George Hoekstra**, physical plant supervisor.

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# Job Corner

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# Job Corner

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## Perspective

**H**ow we think about, react to, and provide leadership, now and over the next decade will have a significant impact on our institutions, on higher education in general, on our profession, and on our own careers.

In considering the leadership role of the physical plant department on campus, I am reminded of the Spanish philosopher Ortega y Gasset in his writings *Mission of the University*. Gasset felt that education should help one "live at the level of ones time." Since we are part of the educational enterprise, what does it mean for us as physical plant administrators to help our institutions live at the level of our time?

Let us stop and think for a moment about leading a physical plant department today. We are characterized by intensive operations extending to every corner of the campus, and we serve many departments with many diverse activities. Our job has become increasingly complex. In addition to dealing with new technologies and rapid changes, we must also be able to handle many different relationships—relations with faculty, with staff, students, suppliers and customers, labor unions and university administrations, and governing boards. There are demands to be creative and innovative, demands for understanding a multicultural work force, and demands to provide leadership responsibility for the environment. The environment that produces and provides what has become known as the *quality of work life*.

Much of what we do requires effective delivery of physical plant services—services that truly allow the institution to get on with what it is intended to be. All this increases the complexity of the job and raises the standard against which our performance is measured.

*Jack Hug is assistant vice chancellor, physical plant services, University of California, San Diego, La Jolla, California. He is the current president of APPA.*

Jack Hug

### THE LEADERSHIP CHALLENGE

The challenge to the APPA leadership is that we be an association that helps every one of us meet our campus needs, thereby helping us live at the level of our time. There are several things that I believe we need to think about and do this year.

- Continue to perpetuate all of the achievements of the past by solidifying and expanding our important basic services.
- Continue strengthening our orientation and involvement programs for new members, officers, and board members to help ensure continuity and a seamless transfer of projects and responsibilities without missing a beat.

- The annual report shows tremendous response, growth, and success in APPA programs and services. APPA has managed its assets well—the physical, the financial, and the human resource assets. Financially, we have never been better managed, and the results speak for themselves. We own property that is appreciating rapidly, and without a doubt, the most important asset is our people. In our membership and on the APPA staff, we have seen hard work and productivity. We have a vision and a belief that we can be better. 1446 Duke Street is an industry-leading, professional address; we are most fortunate to have the women and men who work there.

- Almost all of the good news, however, can be relatively "short-term" if we become complacent. What we have accomplished this year and the years before that [helped us achieve the position we are in today is not going to be good enough to keep us here tomorrow.

- The challenge to our leadership is to look ahead now, with a studied and an informed view of the future. We need to look beyond one year. Too of-

ten we have had to react in response to a problem rather than act in accordance with a foreseen need. Our planning process, thanks to the results of our recent opinion survey, will be reworked to improve our ability at looking ahead.

- Another challenge to our leadership is to position ourselves to take full advantage of enormous service opportunities—ones that will be available to us if we are informed and in touch, and if we have a clear vision of where we are headed.

- The APPA educational programs, publications, and the new information services program must have a healthy dose of "what in the world is going on" type of news. We need this to satisfy our curiosity and to meet our information needs.

- The challenge to our leadership is also in the form of a question, in the midst of rapid changes, will we be able to act quickly and with resolve? How fast can we marshal our efforts to get things done?

We must work on finding ways and means to make it easier for us to get together. Our network of committees and regional associations—with its hard-charging, hard-hitting volunteers—gives us an advantage with which to work. This is truly our competitive edge. Do you know what we have discovered through this membership involvement? We have discovered that from nation to nation, region to region, public to private, large and small, we do have differences. However, the things that make us different are not as great as the things that make us alike.

I know that APPA occupies a special place for a lot of us. Our elected officers, the Board of Directors, the APPA staff, and I want the time you spend with APPA to be the most enjoyable and the most rewarding possible. The story of APPA is a story of friendship. A friendship among physical plant people. It is a friendship that is necessary if we are to meet the requirements of helping our institutions live at the level of our time. ■



## Merging Your Goals for Excellence With the Institution's Mission

by William P. Sexton



**W**e at Notre Dame have a superb student body. We have a very fine faculty. We are winning awards for those and many other things. Is it because we have superb physical facilities? Is it because our halls are in superb condition? Is it because we are building quality products, buildings that are housing the work of very good people? Is that why more students are coming?

No, it isn't. They're not coming because we have a fine campus, a campus that is always in tip-top shape. But that is why they're staying. And I firmly believe it when I say to facilities managers that the work you do keeps morale high and keeps students and faculty at your institutions.

The faculty and the students work well because they have the good feeling that emanates from having top-notch quality around them in every way—certainly in what they see every day. And that is the quality of the facilities, the grounds, and the new construction that can be found on the campus.

I want to take four principles from the popular book, *In Search of Excellence*, and apply them to your job of directing and supervising physical facilities. The four principles are:

*William Sexton is vice president for university relations at the University of Notre Dame, South Bend, Indiana. This article was taken from Sexton's keynote address presented at APPA's 76th Annual Meeting last July.*



- hands-on and value-driven,
- autonomy and entrepreneurship,
- close to the customer,
- productivity with people.

### Hands-on and Value Driven

Let me start with hands-on and value-driven. An important concept presented in *In Search of Excellence* was management by wandering around. That means being present with your people, on job sites, in the halls, in the campus community itself, on the lawn—being there. At Notre Dame a number of departments in our division have what we call "X Day." X Day is when one of us takes a piece of paper, draws an X over it, and tapes it to the door of another. This means that you are not allowed to go into your office until at least noon that day. Don't go in there. Get out among your people and talk with them. What makes the difference between the best managers and the rest is that that person is present. Your supervisors are with their staffs. They're not looking over their shoulder, but they are available and accessible. And they are seeing the somebody who is part of the endeavor. It is a simple little matter that prompts us to trust our people with our presence. Yes, they are going to ask questions and bring up problems. But the reality is that if they do not have that opportunity, they are not going to value the experience.

When it comes to actually making the time to do it, you must be like me sometimes. I feel like I'm up to my ears and I can't possibly get out. Getting out of that office seems to be a very difficult matter indeed. Or there might be other pressures that I know are going to happen if I leave.

There are some traps in our lives that prevent us from doing the things that we know we ought to do. Two youngsters were getting up in the morning. One said to the other, "Things are so boring around here. Let's do something different today. I tell you what; let's say some dirty words today. I'm going to say 'hell,'

and you're going to say 'damn.' Okay?" The little brother wasn't so sure about the idea, but the older one said, "Stick with me and follow my lead." So they go downstairs and their mother greets them and asked, "What will you have for breakfast today?" And the older boy says, "Oh, hell, I'll have some cereal." The mother took a big bar of soap and washed out his mouth. She turned to the younger boy and asked, "What will you have for breakfast?" He answered, "Damn if I'm going to ask for cereal!"

Well, there was a trap there, and he didn't see it. And the problem we confront is the self-esteem trap. You and I need to be with our employees and coworkers if we have trust in ourselves. If you feel good about yourself, you're going to go out there and ask them, "How's it going? How's your family?" It's becoming a friend; it's just that simple. It has risks to it, and a lot of us can't do it. The ones who can't do it mostly are the ones who don't do it at home with their children or their spouses. They don't have that propensity, that intuition, to reach out and touch and be present.

People who feel good about themselves are the highest producers. But sometimes things get in our way, and we run around chasing after dreams that aren't so, or chasing after a work life that isn't in our best interests. What we need to do is avoid what some managers fall into, which is called compulsive/obsessiveness.

I fish every year in Canada with several friends. When we go to Canada, we fly into a remote fishing camp 200 miles from anybody. The plane takes us in, and it won't come back for a week. One fellow in our group immediately goes into the cook tent and cleans all the pots and pans. All we hear the first night as we're sitting around the fire is his banging and clanging. He's in there cleaning. And he can't help himself. It's like the director of physical plant who's out there constantly doing things that other people are responsible to do.

But compulsive/obsessiveness is a

defense for self esteem. If you don't feel good about yourself, that is a way to get around it. And what is self esteem? It's confidence. Confidence comes from experiencing success. Many of us do not program our lives to experience success. We have to achieve things to feel successful. You show me a person who is confident, and you don't have to tell me anything more. I'll show you somebody who succeeds when they try things. And they'll try other things if they succeed. There's nothing like success to breed confidence.

What we have to do, however, is set targets for success. Many of us will write down four or five specific items that we wish to accomplish the next day. Then we take a pen and scratch out the ones we have achieved, and this gives us a great sense of fulfillment. You do that, don't you? I do, too, you get buoyed, and you feel good about the day. Now if you put in its place a day in which nothing was set out to be accomplished, the day goes by and what do you have to show for it? What do you feel? You feel frustrated. Include in your objectives no more than five items, and tell your managers and supervisors the same thing. Urge them to be objective oriented.

What happens when we make lists? We don't have to remember the most important things. Priorities are set. We can become respondents to what we call Parado's Law, which states that 80 percent of what we do is accomplished by 20 percent of our activity. And 80 percent of our activities accomplish only 20 percent of what is our real product. What we have to do is distinguish which are the 20 percent and which are the 80 percent. Listing daily objectives helps us to do that. We want to hone in on high priorities. We set challenges for ourselves when we set targets. There is nothing that is more conducive to mental health than self-imposed objectives.

Hands-on and value-driven? The values are this: We're good. You're part of an organization that wins. You



can have pride in being a member of this organization. You just hired me. I'm a young engineer. Convince me that I'm part of a winning team. Vince Lombardi convinced everybody that as soon as you put on that Packer uniform, you were the best, and they believed it, and it paid off. When they put on your uniform, they're part of the best.

You know what we have to do? We've got to show them that we're the best—to create patterns and myths, as the authors call it in *In Search of Excellence*. That is, what's our history? Prove to me that you're the best. Put up pictures of projects we've done. Remember the stories, and record them, of what we achieved against all the odds in our physical plant activity. In bringing something that was chaos into something that was livable, pleasant, and enjoyable. Spread that pride around. We need to have that.

### Autonomy and Entrepreneurship

The next area I want to look at is the concepts of autonomy and entrepreneurship. When you have someone who truly has the spirit of entrepreneurship, you've got the best kind of manager for your organization. That person looks for opportunities and looks for problems, and has the capability to accept a little risk in the process, too. And is not afraid to let people try things, is not afraid to let people speak in their behalf, to trust them. You show me an organization where there's low trust, where you do not trust me to organize, to oversee my people and operate a job, and I will show you low performance. You show me alternately a place where you trust me to speak in your behalf, and I'll show you somebody who's made a commitment to you, and they won't let you down.

High trust, high performance; low trust, low performance. Many of you have read about participative management ad nauseum. That is, to discuss problems with your people, to draw them in. We all know that that is the

best way to handle things. But when you look at last week or the week before, how much of that did you do? You met a problem, solved it, and got it out of the way. How much time did you spend with your people, giving them the experience of communication and the understanding, the information of being involved. We have to be constantly alert to decentralization and participation. The reality is this: if you took a large organization, your university, and you took five departments, be they academic, administrative, or physical plant, and you look at the very best of those in that university, I will guarantee you that we will see a hands-on, value-driven manager and someone who lets his or her people participate. When there are problems, they have a voice in them, and are involved in them.

The Pattons of the world, who run their organizations with an autocratic style, are not going to lose the ship. They will deliver basic, up-to-standard performance. They won't let you down. You can count on them. They won't reach for excellence, but they won't fail you, either. So if you want to be safe, that is the place to go. Participative management is reaching for excellence.

Avoiding pain from the environment is essentially what happens when we do not have the challenge to find meaning in our work. We've got to allow our people to make their own decisions and be responsible for their own activities. Herzberg, who is the author of this thinking, introduced these ideas in a hospital. The housekeepers were to buy their own cleaning equipment, and to schedule their work, their time. If somebody wanted to take a holiday on a particular floor, they would cover for each other. They made the decisions, and they had to balance the budget. When some of the hospital administrators heard about this, they said these people haven't but about a fourth or fifth grade education. They're going to balance a budget? Herzberg found three women who had put their kids through col-



lege on the salary that the hospital gave them. They can't budget? Are you kidding me? So they put it to work.

The head of the medical staff was an incorrigible fellow. He smoked incessantly and had a way of taking the cigarette and stepping on it on the floor. One of the criteria for the quality of the housekeepers' work was the cleanliness of the floor. One day one of the women came to him and said, "You are no longer permitted on this floor." This was one of the housekeepers telling the head of the medical staff. You know why? She had developed turf. It was hers, and she was proud of it. It was hers alone, he had broken the rules, and he was no longer welcome. He went to the ad-



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Saint Petersburg Junior College, St. Petersburg, FL: **Eugene F. Kramer**.

Salem State College, Salem, MA: **Janyce Napora**.

Saint Louis Community College, St. Louis, MO: **Stephen L. Brown, Willie Wright**.

Saginaw Valley State University, University Center, MI: **Frank G. Snyder**.

Scarborough College, University of Toronto, Scarborough, Ontario, Canada: **Brian T. Smith**.

SUNY/College at Plattsburgh, Plattsburgh, NY: **Leon H. Clodgo**.

SUNY/College at Potsdam, Potsdam, NY: **William Sloan**.

Tarleton State University, Stephenville, TX: **Joseph M. Welch Jr.**

Tarrant County Junior College District, Hurst, TX: **Timothy R. Grace**.

Tulane University, New Orleans, LA: **Henry H. Fry**.

University of Akron, Akron, OH: **Mardy Chaplin**.

University of Alabama/Birmingham, Birmingham, AL: **Linda Flaherty-Goldsmith**.

University of Arizona, Tucson, AZ: **Ray Umashankar**.

University of Arkansas for Medical Science, Little Rock, AR: **Doug Walker**.

University of California/Berkeley, Berkeley, CA: **Donald Bartlow**.

University of California/Los Angeles, Los Angeles, CA: **Ron Calloway**.

University of Central Florida, Orlando, FL: **Anthony W. Blass, J.C. Hicks**.

University of Hawaii, Honolulu, HI: **Rollin Mau**.

University of Houston/Clear Lake, Houston, TX: **William Sabol**.

University of Houston, Houston, TX: **Marcel Blanchard**.

University of Kansas Medical Center, Kansas City, KS: **Mike Wood**.

University of Kentucky, Lexington, KY: **William R. Collins, Edward McClure**.

University of Maryland/Baltimore, Baltimore, MD: **Edgar A. Marshall**.

University of Massachusetts/Boston, Dorchester, MA: **Sharad Desai**.

University of Nebraska/Lincoln, Lincoln, NE: **Gary Thalken**.

University of New England, Biddeford, ME: **Matthew S. Haas**.

University of New Hampshire, Durham, NH: **Susanne Bennett**.

University of New Orleans, New Orleans, LA: **J. Michael Parnon**.

University of Nevada/Las Vegas, Las Vegas, NV: **Charles N. Moody**.

University of Pittsburgh, Pittsburgh, PA: **Joseph W. Fink, Ana M. Guzman**.

University of Rhode Island/Kingston, Kingston, RI: **Harry P. Davis**.

University of South Florida, Tampa, FL: **Bill Callow, Deborah Roberson**.

University of Southern California, Los Angeles, CA: **Chris McAlary**.

University of Texas/Arlington, Arlington, TX: **John D. Hall**.

University of Texas/El Paso, El Paso, TX: **Zeke Monteros**.

(cont. on p. 10)



(cont. from p. 9)

University of Texas Health Science Center/San Antonio, San Antonio, TX: **Billy Cornwell**.

University of Toronto, Toronto, Ontario, Canada: **D. Tyagi**.

University of Virginia, Charlottesville, VA: **Jay W. Klingel**.

University of Wisconsin/Madison, Madison, WI: **Kyle V. Green**.

University of Wisconsin/Milwaukee, Milwaukee, WI: **James P. Strosin**.

US Air Force Academy, USAF Academy, CO: **Thayne H. Judd**.

United States Naval Academy, Annapolis, MD: **Al Agachinsky**.

Valencia Community College, Orlando, FL: **Wayne Thurmond**.

Worcester Polytechnic Institute, Worcester, MA: **Robert Kozwolski**.

#### New Affiliate Members

Business & Industry Center of the Community of Baltimore, 600 East

Lombard Street, Baltimore, MD 21202; 301/396-3022. Representative: John Frey, director of physical development.

City of Wilmington/Public Services, P.O. Box 1810, Wilmington, NC 28402; 919/341-7883. Representative: Bobby L. Ferguson, superintendent of public buildings.

Harbor Branch Oceanographic Institution, 5600 Old Dixie Highway, Fort Pierce, FL 34946; 407/465-2400. Representative: Harold R. Eisenbarth, construction and maintenance manager.

Mount Vernon Ladies Association of the Union, Mount Vernon Estate, Mount Vernon, VA 22121; 703/780-7262. Representative: John S. Thorsen, acting director of physical plant.

Newberg School District, 1421 Deborah road, Newberg, OR 97132; 503-538-8361. Representative: Paul Frankenger, director of physical plant services.

Pinkerton Academy, 8 Pinkerton Street, Derry, NH 03038; 603/432-2588. Representative: Ronald Howe, director of buildings and grounds.

Polk Community College, 999 Avenue H, Northeast, Winter Haven, FL 33881; 813/297-1086. Representative: Don Summerford, director of campus services.

Saratoga City Schools, 5 Wells Street, Saratoga Springs, NY 12866; 518/583-4707. Representative: Ken Relyea, director of facilities and operations.

Seattle Department of Parks and Recreation, 210 Municipal Building, Seattle, WA 98104; 206/684-8012. Representative: Toni Long, director of facilities maintenance.

Virginia Western Community College, 3095 Colonial Avenue, Roanoke, VA 24015; 703/857-7201. Representative: Dwight Blalock, dean of finance and administration.

Vocational Training Council, 14th Floor Harbour Centre, 25 Harbour road, Wanchai, Hong Kong; 5-8932341 ext. 289. Representative: Norman William Ledgerwood, senior architect.

The Westminster Schools, Atlanta, GA 30327; 404/355-8673. Representative: Tom Tarantino, assistant director of physical plant.

#### New Subscribing Members

Flowmole Corporation, 21409 - 72nd Avenue South, Kent, WA 98032. 206/395-0200. Representative: Richard Brinton, director of marketing and business development.

An underground utility installation service using a proprietary, steerable guidedrill method to eliminate surface disruption and costly restoration.

Power Management Company of New England, 496 Country Club Road, York, PA 17402; 717/848-3915. Representative: Donald L. Brandl, vice president and director.

Provides management services to developers, owners, and investors in power projects including project identification, project evaluation, project administration, the design of project-specific solutions to regulatory issues, project management, project owner/manager, and staff assistance to clients.

#### Subscribing Members Changes

Burns & McDonnell Engineering Co., 4800 East 63rd Street, Kansas City, MO 64130; 816/333-4375. New representative: Robert W. McKenzie, PE.

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# Coming Events

(cont. from p. 5)

**Feb. 12-13—Athletic Turf Management Seminar.** East Lansing, MI. Contact: National Institute on Parks and Grounds Management, P.O. Box 1936, Appleton, WI 54913; 414/733-2301.

**Feb. 14—TPC Training Systems Workshop.** Atlanta, GA. Contact: Lisa Arnold, TPC Training Systems, 700 Eastwood Lane, Buffalo Grove, IL 60089; 800/228-3525.

**Feb. 14-16—Environmental Laws and Regulations Compliance Course.** Orlando, Florida. Contact: Government Institutes, Inc., 966 Hungerford Drive, #24, Rockville, MD 20850-1714; 301/251-9250.

**Feb. 15-16—Athletic Turf Management Seminar.** Jacksonville, FL. Contact: National Institute on Parks and Grounds Management, P.O. Box 1936, Appleton, WI 54913; 414/733-2301.

**Feb. 19-23—The 1990 International Symposium on Radon and Radon Reduction Technology.** Stouffer Waverly Hotel, Atlanta, GA. Contact: Robert Page, Radian Corporation, P.O. Box 13000, Research Triangle Park, NC 27709; 919/541-9100.

**Feb. 26-28—Telecommunications Planning for Building Architecture and Wiring Systems.** Atlanta, GA. Contact: Washington State University, Conferences and Institutes, 208 Van Doren Hall, Pullman, WA 99164-5222; 509/335-2946, fax 509/355-0945.

**Feb. 26-Mar. 1—National Plant Engineering**

**& Maintenance Show and Conference.** McCormick Place, Chicago. Contact: Rob Ingraham 203/964-8287 ext. 110.

**Feb. 27-Mar. 1—Environmental Management Roundtable.** Orlando, Florida. Contact: Government Institutes, Inc., 966 Hungerford Drive, #24, Rockville, MD 20850-1714; 301/251-9250.

**Mar. 5-6—CEOs and Senior Management in the Roles of Negotiator, Mediator, and Decision-Maker.** Washington, DC. Contact: American Society of Association Executives, 1575 Eye Street, N.W., Washington, DC 20005; 202/626-2719.

**Mar. 13-15—Telecommunications Planning for Building Architecture and Wiring Systems.** Atlantic City, NJ. Contact: Washington State University, Conferences and Institutes, 208 Van Doren Hall, Pullman, WA 99164-5222; 509/335-2946, fax 509/355-0945.

**Mar. 13-14—Heath Water Leakage Control and Pipe Locating Seminar.** Phoenix, AZ. Contact: Heath Consultants Inc., 100 Tosca Drive, P.O. Box CS-200, Stoughton, MA 02072-1591; 800/HEATH-US (432-8487).

**Mar. 22—TPC Training Systems Workshop.** Buena Park, CA. Contact: Lisa Arnold, TPC Training Systems, 700 Eastwood Lane, Buffalo Grove, IL 60089; 800/228-3525.

**Mar. 22-23—Preservation Planning and Growth Management.** Pittsburgh, PA. Contact: The Center for Preservation Policy Studies, Lisa Wormser, National Trust for Historic Preservation, 1785 Massachusetts Avenue, N.W., Wash-

ington, DC 20036.

**Apr. 3-4—Heath Water Leakage Control and Pipe Locating Seminar.** Houston, TX. Contact: Heath Consultants Inc., 100 Tosca Drive, P.O. Box CS-200, Stoughton, MA 02072-1591; 800/HEATH-US (432-8487).

**Apr. 17-18—Managing Management Time.** Columbia, SC. Contact: Daniel Management Center, College of Business Administration, University of South Carolina, Columbia, SC 29208; 803/777-2231, fax 803/777-4447.

**Apr. 17-19—Asbestos Roofing Projects: Issues and Answers.** Georgia Institute of Technology, Atlanta, GA. Contact: Training Programs Office, Georgia Institute of Technology, Atlanta, GA 30332-0385; 404/894-3806.

**Apr. 24-25—Managing Management Time.** Washington, DC. Contact: Daniel Management Center, College of Business Administration, University of South Carolina, Columbia, SC 29208; 803/777-2231, fax 803/777-4447.

**Apr. 28-May 3—Wall and Ceiling Industry Convention and Exposition.** Metro Toronto Convention Centre, Toronto, Ontario. Contact: Association of the Wall and Ceiling Industries, 1600 Cameron Street, Suite 200, Alexandria, VA 22314-2705; 703/684-2924; fax 703/684-2935.

**May 9—Asbestos Building Inspector/Management Planner Update.** Georgia Institute of Technology, Atlanta, GA. Contact: Training Programs Office, Georgia Institute of Technology, Atlanta, GA 30332-0385; 404/894-3806.

## FACILITY CONDITION ASSESSMENT A Seminar Designed For Physical Plant Management

San Diego, CA

February 9, 1990

**ame**

804-498-4400

### Seminar Agenda

Class starts at 8 a.m. and concludes at 4:30 p.m.  
Topics include:

- Introduction to Maintenance Management
- Types of Facility Inspection Programs
- Implementing an Inspection Program
- Facility Audits
- Ingredients for a Good Inspection Report
- Classroom and Field Inspection Exercises
- Cost Estimating Techniques
- Inspection Reports in the Budget Process

### Registration Fee

The registration fee for the one (1) day seminar is a surprisingly low \$395.00. Hotel accommodations are not included in the registration fee, but are available at preferred rates at the course location, the beautiful Hotel Del Coronado in San Diego, CA (For hotel reservations call 619-435-6611).

The course is presented by:

**Applied Management Engineering, PC and**

**Dr. Harvey H. Kaiser**

Applied Management Engineering, PC (AME) has become one of the nation's leading Architectural/Engineering firms specializing in facility inspection programs and development of comprehensive short and long-range plans for correction of deficiencies. Additionally, AME has established itself as a source of comprehensive training in the Facility Maintenance Management environment. In the past nine years, AME has trained hundreds of Planner/Inspector personnel in critical facets of maintenance management programs.

Dr. Kaiser is a recognized leader in the Facilities Management area. He has authored numerous textbooks and articles, and is a frequent speaker for APPA and NACUBO.

Physical Plant Directors Considering a Facility Inspection or Facility Audit should attend this seminar.



# Job Corner

**J**ob Corner appears monthly in *APPA Newsletter* and *Facilities Manager* and includes both positions available and positions wanted. Job Corner advertising is an excellent way to reach more than 3,800 facilities professionals who receive the publications each month; in addition, an estimated pass-along rate more than triples this number.

Readers of *APPA Newsletter* and *Facilities Manager* represent the most highly qualified pool of potential candidates for directors' positions, managerial positions in maintenance, operations, housekeeping, grounds, energy, and mechanical engineering.

Following is an explanation of policies and procedures for listing a position in Job Corner. If you have any questions about advertising, please call Diana Tringali at APPA, 703/684-1446.

**Classified Line Advertisements:** Line ads are set in the style of the publication in 10-point type at the rate of \$20 per column inch, measured to the nearest quarter-inch.

**Boxed or Display Advertisements:** Boxed ads are set in 9-point type with 11-point heads. We can design these for you and you may include your institution's logo if you wish. Please do not fax the logo. Or, you may submit a black-and-white, camera-ready ad. The width of a one-column ad is 2-1/4 inches; the width of a two-column ad is 4-3/4 inches. The maximum depth of all ads is 9 inches. The rate for boxed or display ads is \$25 per column inch, measured to the nearest quarter-inch.

**Minimum Charge:** There is a two-inch minimum charge on all Job Corner ads.

**Cancellations:** Cancellations are not allowed after the materials closing date for the month.

**Position Closing Dates:** To ensure that our readers have a fair opportunity to respond to ads, we ask that Job Corner ads list closing dates *no earlier than the 25th* of the month of issue.

Closing deadlines for job announcements are posted at the request of each institution. APPA encourages all individuals interested in a position to inquire at the institution regarding its closing/filing date.

**Discounts:** Discounts and agency commissions are not allowed on Job Corner advertising.

**Billing:** APPA will send an invoice and a copy of the publication in which your ad appears. Payment is due within 30 days.

**To Submit a Job Corner Ad:** All ads should be typed and double-spaced. A purchase order should accompany your ad. Send your ad and purchase order to:

Job Corner  
APPA  
1446 Duke Street  
Alexandria, VA 22314-3492

You may also send your ad via fax machine. The number is 703/549-2772.

**Deadlines:** Job Corner deadlines for the next three issues are **February 9** for March issue, **March 9** for April, and **April 9** for May. *APPA Newsletter* and *Facilities Manager* are mailed on the first business day of the month of issue.

• • •

## Medical Center Director of Facilities Operations

To lead a team of facilities professionals who are seeking new ways to provide service for the internationally known University of Rochester School of Medicine & Dentistry, School of Nursing, and Strong Memorial Hospital. The Medical Center facility is a complex of over 3 million gross square feet, valued at more than \$250 million. The department operating budget is approximately \$10 million. As a member of a University-wide facilities organization, this individual will direct for the Vice President for Health Affairs the provision of all facilities management functions in the University's Medical Center, and will also serve as Associate Director of University Facilities.

The successful candidate should have: seven plus years of related experience in the supervision of a facility or utility maintenance operation, preferably in other academic medical centers, hospitals, or other institutions of similar complexity. Excellent communication and problem-solving skills are essential. A bachelor's degree in a technical field such as mechanical or electrical engineering is required; a graduate degree in management or business is highly desirable.

Interested and qualified candidates should send a resume and a cover letter, summarizing the most significant accomplishments in his/her most recent position to: Search Coordinator, Personnel Department, University of Rochester, Box 636W, Rochester, NY 14642.

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ministrator and he said, "Jiminy Christmas, where in the world do your people get off?" He thought about it a moment, realized what had happened, then said, "I'll go down and apologize and see if she'll let me back."

And it works, it does work. The custodians in our colleges and universities, could be treated the same way if the supervisor is alert enough to see that possibility. But if we say no, it is not possible, we're going to be right. And as a consequence, we'll also create apes and a manager who is a bottleneck, who stops the potential of people to accomplish things. There are people who work for us who may not reach excellence, but they never fail us either.

Expose ourselves to difference, to learning. APPA's Institute for Facilities Management and the Executive Development Institute are examples of the kind of activation that lifts up new hopes. Recently, someone I know skydived. His activation level went way up because of the exhilaration of doing something new. We do not have to jump out of an airplane to get our activation level up, but he has always wanted to do that. These are the things we have to seek out for ourselves. The benefits are there.

#### Close to the Customer

Being close to the customer is when they know you and have come to trust you. The students, faculty, and staff all are your customers. They know who you are, they know the person who is the median through which the benefits of good quality facilities are assured.

One thing that I think is of paramount importance is to take classes from people who have actually worked in the profession. The people I wanted to teach my first-level courses in the college of business had done the things they were teaching about. Many who have just completed a Ph.D. program and who have never had a job or never met a payroll are not very good with our first students. Usually, they only talk about things they've read about.

Some of them can pull it off, but I would much rather have someone like you teaching my first-year students. You are doing the things you are teaching about. Teach at your universities. Talk to the dean at the business school about being an adjunct faculty member at your university or college. You could teach courses in basic management or project management. If anybody can teach about project management, you have been there. You have done it, you've delivered, you have numerous examples, and that's what turns on our kids.

Teach at your school. You will hit your customers right between the eyes when you do that. The faculty re-

spects people who are part of the faculty, and that is what you would be. In addition to that, the students will see the person responsible for the campus facilities management effort.

Being close to the customer involves also being close to the key administration, the officers of the universities. The director of our physical plant is a member of the team. We all feel free to go to him or her. The director is responsive to what we want to do and embodies, for me, what I call the change-agent role. If it's new construction, refurbishment of our facilities, grounds management, custodial service, or the engineering side of our enterprise, a change-agent has to have what I call CHER.

*C is for credibility.* When you say something is going to happen, it has got to happen. Do not say anything you cannot control. If you want to build trust, your word always comes true. Jim Smith tells you it's going to happen, it will. He always keeps his word.

*H is for homophily.* Homophily is when we have similarities based on common backgrounds. Other people have similar experiences, or they face challenges like me. Change agents have to create the impression that they are like the people that they wish to influence. If I don't know you, I can't sense an likeness. Homophily won't happen. We've got to be together in our goals and objectives.

*E is for empathy.* I've got to sense that you know what I'm trying to do when I come to you for help. For instance, I need to re-do the whole face of my residence hall. I'm the rector of that hall and you've got to understand what I'm trying to do. I've got to sense in you an understanding of where I'm at when I'm trying to deal with my people, the kids who live in that hall.

And finally, *R is reciprocity.* You want to influence me with your plans for resolving my problem. If you want to influence me, let me influence you. Let me suggest changes to your plan, and be receptive to them. Don't meet



every suggestion of mine with "NO, we can't do that. You don't understand engineering. You don't fully understand the process of project management." Don't tell me that. It may be true, but don't tell me that. Let me negotiate with you. Change agents always negotiate. Being right is not enough. The seeds of the transaction, of the trust and the respect and the pride in your organization, will accrue if you let me CHER.

Sometimes the rest, as opposed to the best managers, get into a pervasive negativity. They constantly look for trouble. "Oh, we can't do that. That's going to cause a lot of difficulties over here with our schedule." If you catch yourself saying no to about three or four people in a row, you may be pervasively negative—all or nothing, there's no room for compromise. A mental filter. Every time someone comes in from academics ("those prima donnas") we shut them off. What happens? We will be right. If we are always negative, we are going to be right. And why? Because when people come to us, the last thing they are going to need is someone who jumps down their throat, so what do they conclude? Well, they're going to be right. If you think I'm going to be trouble, I will be trouble. If you think I'm going to be uncompromising as an academic, I will be.

Our people are like that. I'm like that when I come to our director of plant. If you expect trouble from me, you'll get it. If you expect me to cooperate, to be genial, to be responsive, you'll get it. And your people will, too.

### Productivity with People

The final thing to look at is productivity with people. We've got to establish a culture in our organizations. A culture that says pride, a culture that says trust, a culture that says you're important. I want you to appreciate me. I want you to know that I've made a sacrifice, although it hasn't been publicized. If you know that, and if you tell me so, I'll make sacri-

fices for you. You won't have to ask me to come in early or stay late, I'll do that for you. If you can convince me by your actions and your words that you appreciate and trust me, that you can give over confidence to me to do something in your behalf. If you show me that, you've got somebody who will make sacrifices, who will rise above their capabilities, if you'll simply let me have that opportunity.

People will tell you they are different at home. No, they are the same. If you're not a sharing, caring, person at home, you're not at work. If you want to make a change, start at home, and it'll bleed into work. It's a reality and has too often been the case. Don't be an immobilized person.

What are the rest doing? They're analyzing and debating. They are trying to find special ways to overcome their problems. They figure they can get a tip and it's going to solve all their problems. They're heavy into cost control. All they talk to their people about are costs, costs, costs. Do not run any overtime, people. Don't let those people stay over. Make them clock out, keep it down. And when they talk to their people, it's, "I want ideas, ideas, you haven't got any ideas." He has never asked before, and all of a sudden, he is surprised that they don't have any. These managers are over organized and rule by remote control. They are in their offices. They don't come out. The rules are doing the managing, not the people. When the rest do that, you know what happens.

There was a guy in 1929, an English major, who left Swarthmore College. There wasn't a lot of work available at the time. He went into the labor market and no one wanted him. But his father-in-law hired him, so he worked in a public accounting firm as the office manager. He had such strict procedures that there was no bending around them. He had to do exactly what was supposed to do, and he lived the life of unerring, unbending procedures. He did that for eight years. Then the second world war

came along. He left the firm and went into the Navy. He spent the war years stationed in a supply ship in the South Pacific, then he went back to work for his father-in-law in 1946. He worked there for another five to eight years, until eventually, his father-in-law fired him at the age of 46. Finally, he was freed to try to find his way, and freed from the bonds of that kind of organizational arrangement.

He lived in France for a while, and his wife encouraged him to write. He wasn't very good at it, but he kept trying. He was going to turn fifty when a publisher decided they'd publish one of his manuscripts. They gave him a pittance of a stipend, but they published his work, which contained his recollections of his war years. It was called *Tales of the South Pacific*. And he wrote *Hawaii*, and *Covenant*, and *Chesapeake*, and *Alaska*. James Michener spent almost thirty years of his life in the bondage of an organization that didn't have an eye toward the best. They had simply procedures, controls, lock-step action. Michener said, "I believe today that I could have accomplished so much more of my life if I had had the courage to step out of that, or had the management with the foresight to overcome that."

What's the bottom line? It's achievement and autonomy. Give me freedom. Trust me, and be there to appreciate me. Meaningful belonging. Even if I'm one of the custodians in the most modest of positions, challenge me. I've got more to give than maybe you're asking of me.

Affirmation. Whatever you do, appreciate me. Tell your employees that you appreciate them; they need to hear it. It is the most lonely thing in the world to have accomplished something that nobody else knows or cares about, and nobody else cares about, and it has been something that has been a contribution. So we've got to be there.

Confidence sets our targets. Enjoy the confidence that will ensue. Be careful of being obsessive about procedures and cost control. Creativity



comes from a high activation level. Take more education. Read novels. Expose yourself to newness. You don't have to jump out of a plane to do it, but that is an option.

**Credibility.** Take every opportunity to give your word, and then keep it. People will know who you are as a result. **Competence.** Be competent in appreciation, in caring, support, and building pride. **Conflicts.** When conflict ensues, negotiate, compromise. Be able to deal with the academic side, the officers of the university, in a way that they can influence you as you influence them.

Finally, don't allow yourself to get into a trap where you cannot let your staff and coworkers know how much they are appreciated and valued. Some of you may feel that you don't need professional or personal development—that you already know all the answers and don't need improvement. When someone says that to me, I say, "That's fantastic. That's really fantastic."

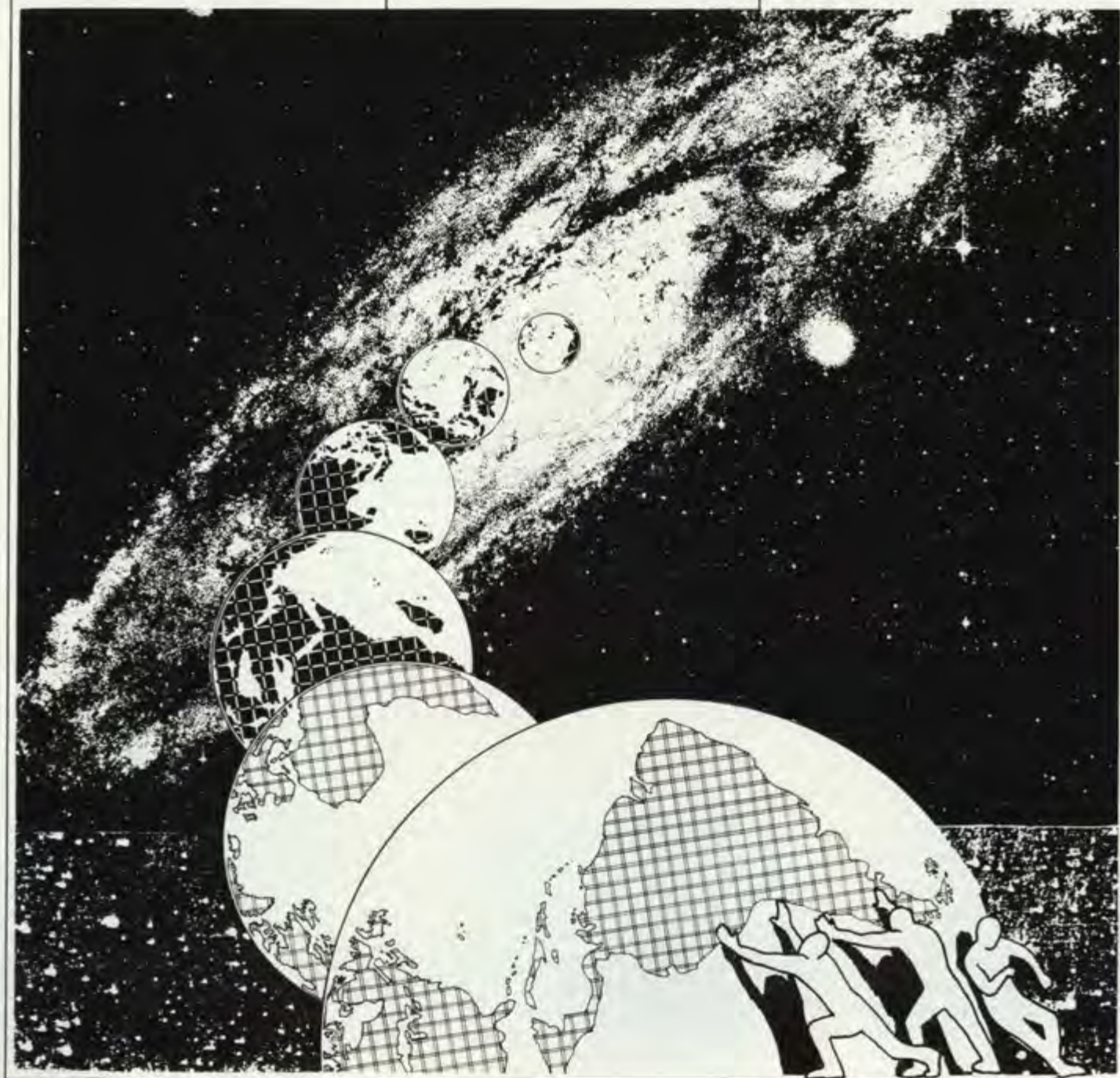
During a conversation between two women, one said to the other, "My husband is such a dear. You know what he's doing? He's adding 5,000 feet to the side of our house for an atrium for me. He knows how much I love flowers. Isn't that wonderful?" The second woman said, "That's fantastic. That's really fantastic." "You know what else?" said the first woman. "He's going to get me a new car, and I think it's going to be a Cadillac. Isn't that going to be nice?" The other woman said, "That's fantastic, that's really fantastic." "What's your husband done for you lately?" asked the first woman. "Nothing." "Come on, he must have done something?" "You know what he did? He sent me through a human relations training program recently," said the second woman. "Did you learn anything?" "No, nothing." "Come on, you had to learn something." "Well, I used to have a very bad habit. I used to say bull——. I used to say it a lot. They taught me that every time I have the urge to say bull——, say *fantastic*." ■





## Visioning: Management Fad or Proven Concept?

by Alan Gilburg and  
Martha Spice, M.Ed.





*Where there is no vision, the people perish.<sup>1</sup>*

In the '90s in another century, a number of APPA members' precursors were involved in major physical plant expansion programs of enormous proportions. They were captivated by a vision so powerful, so compelling, that they literally riveted the energies of some five generations in one of the world's most breathtaking building programs.

Look back to the year 1090 in France when the first of the grand Gothic cathedrals was conceived. Not only did the vision of grandeur commit people to eight generations of financing and construction, but it also stimulated breakthroughs in every area of architecture and the building trades.

What made this unique phenomenon possible was a coalescence of three key ingredients all at one time: vision, values, and economics. The visionary leaders actually saw in their mind's eyes a magnificent structure that would literally represent heaven on earth. The structure's very being would not just symbolize heaven but would give participants the experience of heaven in the here and now.

The values contained in this mighty vision were rooted in the medieval view of salvation, which dealt with health, wholeness, and service to humankind. In addition, there were values having to do with generating civic pride, providing employment, and creating wealth.

The vision and values in every successful cathedral actually built were fueled by the economic engine. Every cathedral has its "Chapter" or Board of Trustees whose job it was to raise the investment, hire the architect and workers, account for the expenditures, and provide for the project's long-term stability.<sup>2</sup>

So, what does this ancient example have to do with the physical plant

administration of modern colleges and universities? Maybe nothing, maybe everything. What our ancient counterparts managed to do was to galvanize the commitment, energies, and resources of whole populations for more than 200 years. As a result, they left lasting monuments that continue to inspire and attract millions. Can such a blueprint inspire us to explore new options for our own time? This article explores the real power behind the concept of vision and suggests ways the modern leader/manager may tap that energy for exciting results.

#### What is Vision?

*Vision is the foundation on which we can create what really matters for ourselves, for others and for humanity.<sup>3</sup>*

Vision is the link between dream and action. Vision is the "seeing" in advance that enables us to create the desired future, starting now. The act of vision literally requires a "leap of faith." It enables us to leave behind the cautions and limitations of the present and catapult ourselves into the future we have defined.

The vision is not just a pretty picture of how we would like things to be, but an actual foretaste of a reality that compels us toward it. We are not talking about simple fantasies or sweet dreams of the "great bye and bye." We are talking about a go-for-it attitude that helps us dare to adopt a dream, see it fully laid out before us, commit the vision to a strategic blueprint, and start construction.

What happens when true vision is present among a group of people? First off, they become inspired; they experience something that compels them to commit their all. Second, they become unified. They find ways to cooperate, support one another, and synergize. Third, they persist and persevere. They commit to the long haul and stick to it.

As an example, we might remember the space program of the 1960s and the way President Kennedy inspired the nation and NASA to perform far beyond the call of duty in order to put a man on the moon and return him safely by the end of the



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decade. Closer to home, APPA's HEFT program (Higher Education Facilities Trust) catalyzed action-to-completion of a substantive agenda during 1988-89. HEFT provided outstanding support to managers of this nation's capital assets of education.

What are the characteristics of visions? Visions have to do with the embodiment of great values: love, caring, wholeness, cooperation, peace, all the ennobling virtues that call forth the best from the human spirit. To bring the issues close to home for APPA members, let us review the world of the cathedral builders.

There is an old anecdote worth repeating here. A stranger sees three men by the road all doing the same thing. He asks the first what he is doing and gets the reply, "Why, I am just piling stones on top of one another." The second man replies, "I am building a wall." The third looks up with rapture in his eyes and says, "I am building a cathedral."

What do the bricks and mortar of your world actually stand for? What are the qualities and values that your physical plant represents? If you get stuck on the bricks and mortar and are just piling stones on top of one another, you will inspire no one and find little support for whatever dreams you might timidly allow yourself.

Leadership, vision, mission, and productivity are current topics of serious study and observation. We are getting more clear about what they require and how to go about promoting them. Certainly, developing vision takes more than a few how-to steps. It is an act of courage. It involves plunging inward toward our own center where the vision for our life is found. Unfortunately, too many people shrink from the prospect of searching within. So we abandon the process and settle for whatever we can.

In our consulting experiences over the past twenty years, we have been assisting people, ourselves included, in taking the inward journey. To date we have not found a single person who has not been thrilled at the inward discovery process, once the journey has begun. How does one start?

### Getting the Vision Clear

*Vision has two fundamental elements. One is to provide a conceptual framework or paradigm for understanding the organization's purpose—the vision includes a roadmap. The second important element is the emotional appeal: the part of the vision that has a motivational pull with which people can identify.*

You can envision alone or with your team. Before starting, let us get the context straight. The process is critical. You have to be patient, gentle, trusting, listen most of the time, and go with the flow. You are working on the long haul, aligning your life and your piece of the business with solid human values and with nature itself. It takes time to get it straight.

Begin by getting away from the pressures of daily affairs and give yourself a good three to four hours to make a start. You may protest that the crises of your job are so overwhelming that you can't get away. Nothing could be a more deadly admission of how badly you need to get away and start seeing your situation from the perspective of vision. After you have made your start, work in three-hour blocks every one to two weeks until you complete the job.

The right questions are critical. Don't worry about the answers as much as getting the right questions. The answers will come when the questions stimulate you and your team to probe deeply for the "right stuff." Here are some questions with which you might want to start:

- What is it about our organization that we are most proud at this time?
- How does the organization contribute to the quality of our lives and the lives of others?
- What is not working, not happening? What is blocking our organization from achieving its highest potential?
- Forgetting all our current real and perceived limitations, what do I/we really want?
- If money, time, or space were literally no object, what do I/we really want for myself or my/our department?



- What does this idea that I/we really want look like, feel like, sound like? (The more you embellish the idea in rich sensory detail, the more real it becomes in every respect.)
- How are other people going to be affected by our vision? What values does our vision add to their lives?

Although you may want to use the above questions to get started, the process will reach into your fullest potential when you create your own questions and allow the answers to flow naturally. We strongly suggest working alone as well as in teams. For alone work, we recommend daily journal writing early in the morning or late at night before retiring. For team work, we recommend professionally facilitated discussions to prompt new perspectives and creative synergy. Whether alone or in a team, ask the questions and keep writing down the answers as they come, without editing or laundering. Don't worry about being right or achieving agreement at this stage. Just go for the data, all of it, even if parts contradict one another. Just let the answers flow freely.

Clarity will emerge as you trust yourself, one another, and the process. Common threads will begin to stand out from the whole jumble of ideas. It may seem at first as if you are lost





in a swamp of muddy thoughts. This is a natural feature of the creative process. Not to worry! Relax and keep going. Keep asking questions; and note every answer you can give, however large or small, sublime or ridiculous, profound or petty.

As you go deeper into the questioning process stay away from the "how" questions; these questions will only throw you back on focusing on your limitations, not your possibilities. Most visioning exercises are killed by raising "how" questions. Your job at this stage is to get the "what" and the "why" clear. The "how" will take care of itself in time, and only when the "what" is clear.

When your vision becomes clear, as it inevitably will, write it down and let it crystalize. Savor your achievement. Bringing a vision into the open is like giving birth to a child. It's a holy act well worth celebrating. So, do it!

#### Translating the Vision

*By focusing attention on a vision, the leader operates on the emotional and spiritual resources of the organization, on its values, commitment and aspirations.*

Every vision needs to be translated into a strategic plan for the organization. Now you can work on the "how" questions. Miraculously, when the

"what" and "why" are clear, the "how" questions cease telling you why you can't do something. Instead, they become problem-solving steps in the strategic plan.

When an individual or team has been wrestling with a new vision, often at an intuitive level, it is not easy to suddenly get practical. So take some time to let the original vision gel in its non-practical form before crunching it into blueprints and MBO plans.

Individuals as well as teams frequently need assistance in the translation process. Test your vision with practical people. Work on articulating it until they can understand and get excited about it. It may take some time before you get it into shape. Listen to the reactions of practical people and go back to the drawing board to discover new translations. Remember, you are not changing the vision, only translating it into practical language.

The translation process can produce depression—a natural byproduct. If you wrestle vigorously to bring forth a "child" and someone else does not appreciate it, the realization can be depressing. After all, you meant it to be a boon to them in the first place. When you are able to take in the misunderstanding, confusion, or resistance of others as gifts in your continuing efforts at achieving clarity, you will eventually gain your goal. So, welcome the ideas of others and let them help you translate your vision into a strategic plan.

Many of you who have engaged in the tedious process of strategic planning will find this approach invigorating and thoroughly satisfying. Most textbook strategic planning fails to start at the level of vision and bogs down in a morass of picayune details. Since you know clearly why you are planning, you can engage in the process with enthusiasm.

#### Achieving Alignment Throughout the Organization

*Commitment is not something that emanates from management edict. Instead, it results from extensive communication and management's ability to turn grand causes into small actions so that*

*people throughout the organization can contribute to the central purpose.*

Vision is not the kind of commodity that survives well in a dictatorship, corporate or political. Rather, vision acts like a magnet among a scattered pile of iron filings. It attracts alignment, getting all the diverse fragments to march in the same direction. Hence, the first part of the strategic plan needs to include a way of allowing the vision to attract people into owning that vision for themselves.

The actual vision must originate at the top of the organization. However, it must be owned by everyone else in order to make a difference. One way to make this happen is to create a vision with "soft edges" that can be modified by the rank and file. This can be done through department meetings, hearings, and informal discussions. When the people actually see that the "final" version has indeed been influenced by their ideas, they will feel a sense of power that will translate into bottom-line commitment to the organization.

Once again, it is critical to trust yourself, trust your people, and trust the process. The initial part of the alignment process is messy and likely to engender many of the opposite reactions from what you wished you would get. People will test and challenge you to see if you actually mean what you say. This is normal and requires patient listening and responding on a consistent basis.

By resisting the pressure to go for the quick fix or to settle within the comfort zones of your limitations, you can finally get to the bottom line of the whole process. It is the alignment around the vision that galvanizes the energy of your employees to release their creativity, innovation, enthusiasm, commitment, and perseverance. It does not stop with your employees. What about the university administration, trustees, faculty, students, parents, and alumni, not to mention legislators, foundations, and other funding sources? In the end, alignment makes your job easier and more fulfilling.

Everyone wants to know where he or she fits into the scheme of things. Although they may be going through



the same motions, it makes a difference whether your people are simply piling stones, or whether they recognize that they are building a great university for the enlightenment of its students.

### Trust the Process

*Group process evolves naturally. It is self-regulating. Do not interfere. It will work itself out. Efforts to control process usually fail. . . . Learn to trust what is happening. . . . The wise leader knows how to facilitate the unfolding group process, because the leader is also a process.*

It is no accident that some of the best innovative leadership of our time is coming from the East, which has long valued balance, process, and wisdom. Our Western traditions have led us to valuing quick fixes, results above everything else, and whatever passes for the latest fad. Our impatience to achieve quick results gets us bogged down in focusing merely on techniques.

Visioning is not a technique, nor can you borrow a couple of visions from someone else and get them up to speed by the end of next week. If you are incurably impatient, unable to live without constant crises, unwilling to look within, unable to trust others to come up with solid ideas, or unwilling to let go of your need to control everything, you probably won't have read this article in the first place. Nor will you buy into the premises we have espoused.

Much in our culture and the way we tend to do business seems to conspire against the visioning process we have suggested. We tend to view visionaries as weirdos. We tend to see process as the enemy of results. We tend to extract the technique without understanding the philosophy behind it. And we tend to recoil from any process that points us to the world within.

The road we suggest definitely takes courage, faith, and persistence. You will find many roadblocks along the way and a bevy of nay-sayers who can prove with bushels of facts that you are ridiculously off base. You are, however, not alone. You can also take courage from the fact that many of the nation's finest organizations and their

outstanding leaders are already setting the example for you. The tide is turning in your favor.

Earlier, we suggested that you ask challenging questions of those around you on a regular basis to elicit the commitment, ideas, and enthusiasm that will help a vision take shape and begin to live. We strongly recommend that you seek professional help in designing your own visioning effort. A qualified consultant to the process may exist within the ranks of the faculty at your institution. A person external to your operation is not beset by the normal daily pressures that derail attention to your vision. And, they hold your own feet to the fire so that you can get results quickly. The following questions to such an individual may help you get the help you deserve:

- How can you help us discover our vision for our department?
- Who have you helped with their visions and what have they achieved as a result of your assistance?
- What can you do to help us facilitate a better process of getting alignment with our people?
- What kind of time commitment do you see us making in order to complete the process?
- Tell us something about your philosophy of working with clients? What kinds of expectations do you have? What do you regard as a successful consultation?
- How will we know when we are done? Will we continue to need your services, or will you leave us able to carry on on our own?

Another idea . . . Get everyone reading and talking about what they are reading. We have included a list of current business management literature that addresses, directly or indirectly, the importance of vision, cause, and commitment.

We are living in a challenging time in which the pace of life and complexity are increasing daily. We are often tempted to scream: "Stop the world, I want to get off!" Or, we simply bury ourselves in the daily tasks and hope for the best. Having a vision of where we really want to go and enrolling others in that vision is a practice rele-

vant to managing in the 21st century, and perhaps the single best way of navigating these troubled waters. The choice is yours. ■

*Visioning expressed in HEFT—coming in February in APPA Newsletter.*

### Resources

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- Block, Peter. *The Empowered Manager: Positive Political Skills at Work*. San Francisco: Jossey-Bass Publishers, 1987.
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- Peters, Tom. *Thriving on Chaos: Handbook for a Managerial Revolution*. New York: Alfred A. Knopf, 1988.
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- Waterman, Robert H. *The Renewal Factor: How the Best Get and Keep the Competitive Edge*. New York: Bantam Books, 1987.

### Notes

- 1 Isaiah, 8th Century B.C.
- 2 PBS Video, David Macaulay, 1988. Cathedrals.
- 3 *Living With Vision*, by Linda Marks, Knowledge Systems, Inc., 1989, p. 15.
- 4 *The Transformational Leader*, by Noel M. Tichy & Mary Anne Devanna, John Wiley & Sons, 1986, p. 130.
- 5 *Leaders: The Strategies for Taking Charge*, by Warren Bennis & Burt Nanus, Harper & Row, 1985, p. 92.
- 6 *The Renewal Factor*, by Robert H. Waterman Jr., Bantam Books, 1987, p. 12.
- 7 *The Tao of Leadership: Lao Tzu's Tao Te Ching Adapted for a New Age*, by John Heider, Humanics New Age, 1985, p. 115.





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## Safety Officer at a Small College Campus

by Larry Klumas

**T**he rules they are a-changing! Concerned citizens organize. Federal legislation multiplies. The state passes implementing legislation. The city hires more inspectors, and unannounced visitors appear on campus. Citations are issued from building and safety, the fire department, and air and water quality districts. Rubbish landfills reach capacity; costs escalate. Recycling is mandated to reduce rubbish volume. Hazardous waste is not welcome at most landfills, and too much of it is unlabeled. Asbestos removal is expensive. Citizens and college personnel demand more information about hazardous materials used on campus. Students publish critical newspaper articles. Neighbors call the college president's office about noise.

Who handles such matters? Who is responsible? How do you address these multiple environmental issues? How do you grasp control? A new job has been created in response to these concerns: safety officer.

Prior to 1989, various individuals and committees at Occidental College addressed safety issues. Professors conducted their own laboratory safety and hazardous materials programs. There was a campus safety committee and an ad hoc earthquake preparedness committee to address some of these problems. The staff in the physi-

cal plant, personnel, and security divisions and the building and grounds committee all worked at solving some of the problems and concerns. Yes, Occidental had been grappling with these issues, but there was no central organization. There was no cohesive function. No one was in charge.

During 1989, Occidental College hired its first safety officer. The safety officer is now in charge of and responsible for administering all the various environmental health and safety programs mentioned above. But hiring a safety officer did not happen overnight; it was a result of a long search. The need for that central focus, that single individual in charge was recognized two years earlier.

What kind of person did Occidental College recruit and hire? What kind of training was available? What was yet needed? What does Occidental expect from its safety officer? Some of these concerns and how they were answered are addressed in this article.

### Defining the Need

The basic need for a single office, or individual, to handle the various environmental health and safety issues sprang from the changing nature of complying with federal legislation and the increasing complexity in implementing state, county, and city rules and regulations. Additionally, within the city of Los Angeles certain disasters, such as the Whittier Narrows earthquake (5.9 on the Richter scale)

of October 1987, and the upper-story fire in the 62-story First Interstate Bank building, focused attention on the need for planning, preparedness, and even major renovations to buildings.

Occidental College had been handling its programs in a decentralized and uncoordinated fashion. More and more demands were being leveled on professors, administrators, and staff to understand, evaluate, analyze, design, develop, and manage serious environmental health and safety programs. Individuals complained, however, that they did not feel qualified to do these jobs, nor did they have a communications network to remain abreast of the changes. They were being warned of possible stiff fines if they did not comply with regulations, and yet they were given no budget in support.

The personnel director was given the task of developing a safety office job description in 1987; she began making inquiries with other local institutions, including the Claremont Colleges, California Institute of Technology (Caltech), the Jet Propulsion Labs (JPL), and Loyola-Marymount College, as to how they were coping with the safety issues. As a result of these inquiries an initial job description was developed. The position was placed in the physical plant department after considering other departments and stand-alone status.

During the next few months the position description and qualifications

*Larry Klumas is director of physical plant at Occidental College, Los Angeles, California.*



PHOTO BY G. MUELO



*Center of campus at Occidental College*

were frequently rewritten and revised to address the college needs as they came into focus. Finally, the position was approved in the 1988-89 budget and recruitment began in July 1988. The summary of the safety officer function follows:

"Makes inspections and develops a full spectrum of environmental and industrial safety policies and procedures to enhance the overall occupational safety and health of Occidental employees and students, and to ensure regulatory compliance. Assists the var-

ious campus departments and physical plant in developing and implementing programs. Focal point for campus ground safety, air and water quality, asbestos abatement, disaster/earthquake preparedness, and fire liaison and prevention."

The qualifications of the individual desired were:

"Requires two to four years related work experience; bachelor's degree in environmental science, bio-environmental engineering, chemistry, or other closely related discipline; knowl-

edge of pertinent regulations; skill in interpreting engineering drawings and specifications; good problem-solving, written, and verbal communication skills; and service orientation are highly desirable."

#### **Hiring the Person**

Recruiting and interviewing continued from July 1988 until January 1989. Two groups of qualified people, each with a separate range of salary requirements and experience, responded to the advertisement. The first group



**POSITION TITLE:** Safety Officer**REPORTS TO:** Director of Physical Plant

**SUMMARY OF FUNCTION:** Develops a full spectrum of environmental health and industrial safety policies, practices and procedures to enhance the overall health and safety of Occidental employees and students. Assists the various campus departments and the Physical Plant in developing their implementing programs. Makes inspections to ensure regulatory compliance. Focal point for campus ground safety; air and water quality, asbestos abatement, disaster/earthquake preparedness, and fire protection and prevention.

1. Coordinates programs with departmental contacts, the campus safety committees and with the Personnel Office.
2. Develops procedures for storage, labeling and disposal of hazardous chemicals in compliance with OSHA and other pertinent City, County, State, and Federal regulations.
3. Assures compliance with "Right to Know" regulations by developing campus policy on use, storage, and disposal of hazardous substances, and communicating that policy in written form and meetings with employees and students.
4. Assures all employees and students have appropriate access to material safety data sheets (MSDS) for hazardous chemicals utilized in their work and study areas.
5. Routinely audits departmental use and storage of hazardous chemicals; industrial work processes; recommends modifications or improvements in methods of handling, storage, or processing as appropriate.
6. Arranges for disposal of hazardous materials; maintains appropriate records.
7. Arranges for or takes samples, as necessary, to test for presence of hazards.
8. Develops and conducts training programs for employees and students as required by "Right to Know" regulations.
9. Coordinates with Director of Personnel in developing training programs related to general employee safety in support of workers compensation program management (including CPR, First Aid, proper lifting, etc.).

10. Investigates and reports on safety hazards reported by employees and students; recommends appropriate corrective action or abatement steps.
11. Develops project or budget proposals for all program requirements.
12. Prepares annual report required by Southern California Air Quality Management District; assures compliance with AQMD requirements for monitoring of air condition reports and implementation of traffic abatement plan during smog alerts; assists in developing programs for ride-sharing as required.
13. Disseminates information to employees on campus policies and procedures for fire safety. In cooperation with Director of Security and Director of Residence Life organizes fire safety training programs and drills for employees and students as appropriate.
14. In cooperation with appropriate administrators, assures implementation of facilities related aspects of the earthquake preparedness plan; provides assistance in training for implementation of these policies as requested.
15. Consults with Director of Personnel regarding safety ramifications of designating certain areas as reserved parking for employees of the college.
16. Provides quarterly reports to central Campus Safety Committee and semi-annually to be Hazardous Materials Department contacts on current activities, concerns, and projects.
17. Provides staff support as required in the coordination of major safety related projects (e.g. asbestos removal).
18. Performs other duties as assigned by the Director of Physical Plant.

**QUALIFICATIONS** Requires 2-4 years related work experience; bachelor's degree in environmental health or science, Bio environmental engineering, safety, chemistry, or other closely related discipline; and knowledge of pertinent regulations. Skill in interpreting engineering drawings and specifications; Good problem-solving, written and verbal communication skills; and a positive service orientation are highly desirable.

contained technicians, requiring a salary in the \$20,000 to \$30,000 range. The second group included the degreed professionals with a salary range from \$30,000 up to \$65,000.

Backgrounds of the applicants were diverse, but only a few fit the specific

yet broad needs of the small college with a limited budget. There were new graduates with little or no experience, those with manufacturing experience involving chemicals, and those who performed some of the duties required on a part-time or tempo-

rary basis with their respective firms.

Because no ideal candidate appeared, it was decided to hire an individual with good and strong experience in one or more of the areas. The college would send the individual for training in areas of weakness. At a



minimum, a knowledge of chemicals was necessary, along with some experience in complying with the new regulations with any associated educational background. An individual already working at the college who met these requirements was finally hired in February 1989, eight months after recruiting began. This individual was looking for a safety officer position and had completed the Haz Mat Certificate Program at the University of California/Davis the summer before to support the biology program.

#### Training Program

The first task in establishing a training program was to determine the more detailed subject areas that the safety officer would address. These were:

- Asbestos

- Campus safety
- Earthquake preparedness
- Eye wash stations
- Fire prevention and protection
- Fire/smoke alarms
- Handicap access
- Hazardous materials labeling, removal, and disposal
- Hazardous materials communication program
- Laboratory goggles
- Risk assessment
- Smog alerts
- Underground storage tanks

A six-week schedule was developed that required the safety officer to review the current office files and to set up new files in each of the areas within the newly defined responsibility. After the review, he was to make contact with the campus department chairs and staff members handling

each department program and the local city, county, or private program contacts for each program. A department contacts committee was organized to disseminate all pertinent information.

For the first year, the safety officer was given a partitioned budget from within the plant administration budget for publications, seminars, and consulting fees. Those funds were quickly consumed.

The Occidental safety officer has now been on board for more than six months. The most difficult aspects of the new position have been:

- Convince the faculty and administration of the serious nature and importance of the safety programs, and get them to change their established ways.
- Conserve the first year expenditure and establish a future budget program, since safety is much more expensive than anticipated.
- Respond to the many one-time high cost needs associated with hazardous disposal and underground storage tank testing and to develop permanent programs.
- Establish the communication network within the city and private organizations with the college.

#### The Future

The safety officer is much needed even on a small campus because even small colleges must comply with all laws and regulations. The safety officer must be the advocate for some fairly expensive compliance-oriented programs, which compete for the same administrative and educational dollars as the long-established programs. However, without a dedicated safety position and an employee knowledgeable in the current legislation, the small college will forever be playing catch-up, using part-timers and ad hoc committees that are just skirting the issues and hoping they will go away. But safety related issues will not go away. The safety officer at Occidental College is molding the campus policy and prodding the conscience of the college. ■



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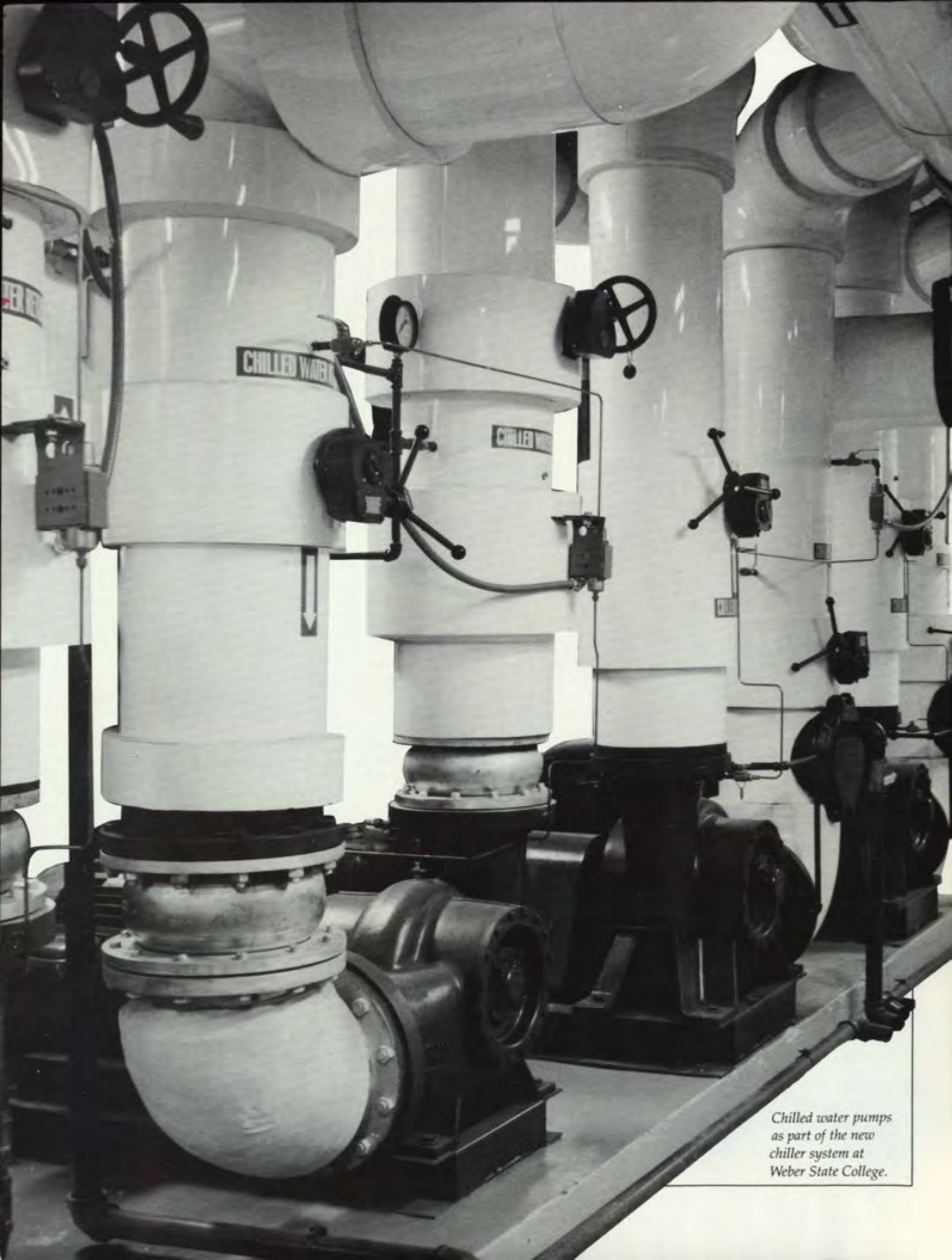
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*Chilled water pumps  
as part of the new  
chiller system at  
Weber State College.*



by David M. Maxson

## Cost Savings With Electrical Centrifugal Chillers

PHOTO BY WEBER STATE COLLEGE

**T**his article is not meant to suggest that one type of cooling or manufacture is superior to the other. It will, however, point out what one large Utah college did to solve its cooling problems, saving almost a quarter of a million dollars in the process for the first cooling season.

Weber State College has a central gas-fired steam plant with an operating pressure of 100 psi and a central cooling plant consisting of both electric centrifugal and absorption chillers. Steam and chilled water are distributed to the buildings through a maintainable tunnel system and some direct-burial pipe. The cooling plant has the capability of running centrifugal, absorption, or both depending upon the load and which utility (gas or power) is the least expensive in a particular season.

This article will show how Weber State College arrived at such a favorable and flexible position with its cooling plant, some of the mistakes it made in the process, and what its dollar savings expectations are for the future.

### The Problem

In 1967, when Weber State College started construction of a six-story science laboratory building, it seemed quite natural to install two 850-ton absorption chillers in the building's basement. With a good amount of steam available and the one 850-ton

absorption chiller carrying the cooling load for the science lab and lecture buildings at 154,000 square feet, this was in fact a trouble-free and efficient system. As the campus grew to 460,000 square feet in 1972, the second absorber was connected and brought on line. Still, the system seemed to operate satisfactorily with no major problems. It was not until a 159,276-square-foot library was added to the system that chilled water circulation problems started. However, by doing some balancing—by way of hand valves in other buildings—the college operators were able to do a decent job of cooling.

In 1977, due to continued growth a decision was made to add capacity to our existing chiller plant. Someone at that time had the forethought to select electric centrifugal instead of more absorption. More absorber chillers would have meant more boiler capacity required to supply the additional steam, which was more costly than adding an electric centrifugal. For whatever the reason, the choice was a good one.

On August 31, 1978 the new 1,400-ton electric centrifugal chiller was started. It ran until September 7, 1978, at which time it froze up due to insufficient flow through the tubes. The damage was repaired through the winter, and this centrifugal unit carried the load throughout the 1979 cooling season. In 1980 the centrifugal only ran for a short period of time and was then taken off line with the understanding that it was too costly to run.

From 1980 to 1988 this electric

centrifugal sat idle and gathered dust. As campus growth continued to take place, we found it more difficult to satisfactorily cool the campus buildings during each cooling season. We were experiencing pressure reversals in the central distribution loop, which frequently caused higher pressure in the return than in the supply. This resulted in little or no supply of chilled water to some buildings. The result was inadequate cooling and discomfort to the occupants.

### Solving the Problem

In summer 1984, the physical plant department commissioned a comprehensive review of the campus central chilled water system. An engineering consulting firm conducted a study that looked at primary cooling equipment, chilled water distribution, and the method of secondary utilization in each building. When the distribution system was found to be generally adequate, attention was focused on the central chilled water plant and the method of end utilization.

The study revealed and recommendations were made to:

- Upgrade and recommission the electric chiller. This included a new digitally controlled panel interfaced with our automation center, and a reconfiguring of the compressor for a higher coefficient of performance by changing the gear ratio and impeller style. This required a derate of the chiller from 1,400 tons to 1,250 tons.
- Repipe the electric and absorption chillers to be in parallel with each other rather than in series. This also included reducing the pumping capacity of the chiller pumps to handle the local loop only, three 150-HP pumps were replaced with three 40-HP pumps.
- Delete all individual building chilled water secondary pumps and distribute chilled water through a central delivery loop, utilizing two large,

*David Maxson is director of physical plant at Weber State College, Ogden, Utah.*



secondary pumps driven by variable speed controllers. This speed being determined by a required minimum pressure differential at the hydraulically most remote building.

Convinced that our cooling problems could be solved, and now encouraged by some solid engineering data, all we needed was the funding to proceed. The engineers' 1985 estimate was approximately \$700,000, which also showed a projected annual energy savings of \$100,000. Funding was obtained from the 1987 legislature and construction was started during the winter of 1987-88. The project was completed in spring 1988, just in time for the new cooling season.

### The Result

The results were astonishing. The one 1,250-ton electric centrifugal was serving 1,003,000 square feet of building area, and it was cooling more efficiently with fewer comfort problems than Weber State had ever experienced, despite above average ambient temperatures for the summer. When we received the first electric bill of the cooling season, we almost could not find the slight increase in power it took to run the electric chiller. Natural gas consumption dropped off so drastically that the gas company sent their repair crews out to check the meter and lines, thinking there must be a broken line or other problem.

In the five summer months of 1988 that we ran the chiller, our gas bill was \$268,265 less than what it cost for the same period in 1977. Factoring in the additional electric costs, this dollar amount dropped to a net savings of \$245,995 for the 1988 cooling season. The annual comparison was a 1988 net savings of \$267,934 over 1987.

Our future plans are to keep the now idle absorption chillers in good working condition and use them for peaking-only purposes, limiting both hours and extent of service. This, of course, depends upon which type of cooling is cheapest to run. Current local energy costs favor electric chillers with a higher coefficient of performance (COP) over single-stage absorption units. At some future date, if the absorption chillers are called back into a heavier service for extended periods of time, and if electric rates are still favorable, a replacement project may be considered to substitute one or both absorption chillers with electric machines.

Recommissioned 1,250-ton electrical centrifugal chiller at Weber State.

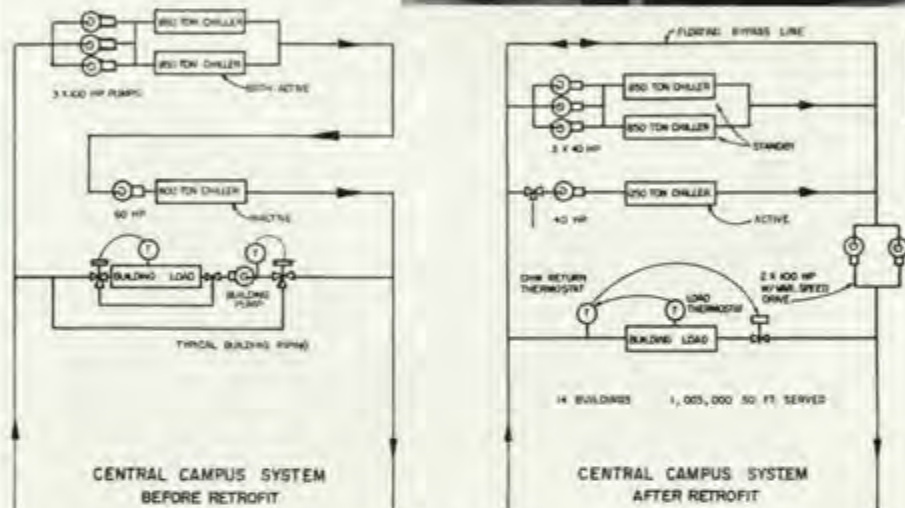
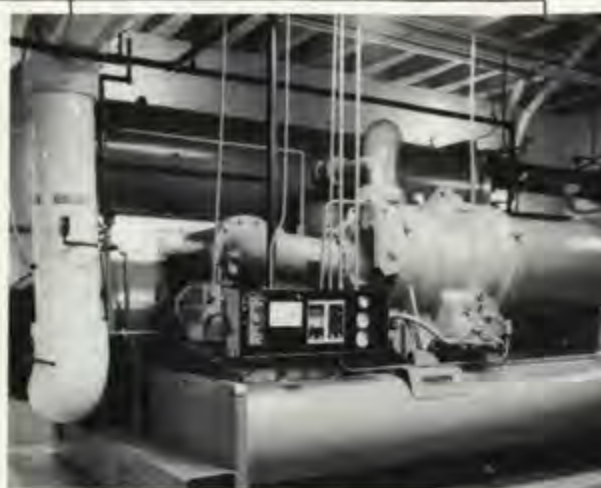


Figure 1  
Chiller System Before and After Retrofit

Both types of cooling are good and have their respective applications. Absorption is more desirable if an inexpensive source of low-pressure steam or hot water is already available. One such source is back pressure or exhaust from a steam turbine that may be used for generating electricity. If that exhaust would otherwise be wasted to the atmosphere and could be captured for this purpose, then absorption may be ideal. If vibration and noise are objectional, then centrifugal may not be the answer.

### Looking Back

Several observations can be made and some lessons learned as we look at the series of events that took place leading up to our chilled water problems.

- The initial design of the system did not lend itself to any kind of flexibility or growth. The capacity of the system was limited to the GPM flow

through the chillers as they were designed in series.

- As new buildings were built and added to the system, individual building pumps of various sizes were connected without consulting with the central system design engineer to see if these pumps would be compatible.

- The length of time that the electric chiller sat idle when we could have been saving dollars seems to be a hindsight issue.

Although other mechanical plants may not be configured exactly like the one at Weber State College, there is some similarity between what was accomplished here and what could be equally successful at other institutions across the nation.

As physical plant administrators, are we satisfied to just make sure our equipment stays running? Or are we staying abreast of a fast changing and demanding technical field and continually looking for more efficient ways to perform our task.



### Facelift

Stetson University, Florida's oldest private university, in DeLand, Florida received a facelift to return the four-block Woodland Boulevard it fronts to a state that lives up to its name. In the early 1900s, Woodland Boulevard was canopied by water and live oaks, but many of these trees have died or are in a bad state of decay.

In the first step of its master campus landscape plan, Stetson historically

## Resource Management

Stephanie Gretchen



16ft., 200 gallon, live oaks to be planted on Woodland Blvd., DeLand.

renovated the four blocks by planting 139 fully-leaved, 16-foot live oaks. According to Bill Dreggors, president of the West Volusia Historic Society, "In the 1880s a tax break was given to residents who planted trees. The boulevard was very wide with large oaks down the center and [on] a lane on either side. In 1916 the oaks at the center were removed so the boulevard could be paved with brick."

David Rigsby, landscape architect at Stetson, installed irrigation and planted the trees, some with 200-gallon root systems. Once underplanting of flowering trees begins next year, this street will be wooded once again.

### Extinguishing False Alarms

Western Michigan University has solved the problem of abused fire extinguisher cabinets, inoperable break-glass latches, and stolen and emptied extinguishers. All extinguisher cabinets were armed with pull- and catch-

door mechanisms. Every cabinet was painted the required red and equipped with a "Fire Extinguisher — Alarm Will Sound When Fire Extinguisher is Removed" sign placed on the painted plexiglass insert. The alarm cost is approximately \$35, plus installation.

Inside the cabinet a battery-operated alarm was bolted to the wall; cables connected the extinguisher to the alarm. When the extinguisher is removed an alarm sounds. When there is a fire this helps alert people; when the extinguisher is removed in a false alarm, the noise draws attention to the culprit.

Robert H. Peterson, Manager of Residence Halls Facilities, explained that the alarms were put in place prior to the students arrival, as if the alarms had always been there. "This way [the students] didn't feel we were challenging them," Peterson said they saw an immediate drop in extinguisher problems. "The alarms have been in for three semesters and we have had no student abuse to the extinguishers."

For more information contact Peterson at Western Michigan University,

Kalamazoo, MI 49008-5011; 616-387-4740.

### Workplace Literacy

Workplace literacy is of continuing concern on many campuses. According to statistics from the U.S. Department of Education, there is good reason to be concerned. The Department said that 27 million Americans "can't read or write well enough to perform daily requirements." The employees who cannot read, but have learned to compensate by following what others do, become potential hazards, especially in a physical plant environment. Employees who cannot read a service or instructions manual, or even the department's bulletin board, which may carry messages of importance, can be harmful to themselves and others.

According to much of the literature circulating at present, there are many reasons for illiteracy, most having nothing to do with a person's ability. Literacy must be combatted, especially in the workplace, where understanding a written message can not only make a job smoother, but it can also save lives.

The newsletter *Training Trends* suggests offering training programs in which words and terms pertinent to the job are used with vocabulary lists that apply to the industry. *Training Trends* stressed vocabulary building because "it is our vocabulary that gives us the tools with which to think."

For more information on helping literacy in your workplace, a copy of *The Bottom Line, Basic Skills in the Workplace* is available by sending a check for \$2.50 to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9325, or by calling 202/783-3238 and charging the book to your credit card. The stock number is 029-000-00424-2.

### Recycling Cardboard

With landfill prices exploding and the interest in recycling booming, a new method for recycling cardboard is a welcome idea at the University of Illinois/Urbana-Champaign. Gary Rossman, assistant director of operations, implemented a corrugated cardboard program on campus in July 1988. Since then the program has saved the university \$36,000 and kept thousands of cubic yards of waste from going to the landfill.

The program began last year when the county's landfill reached its capacity.

*Continued on page 38*

Stephanie Gretchen is assistant editor of *Facilities Manager* and the editor of *APPA Newsletter*.



ity. At that time the university used its transfer station for only 20 percent of its waste stream. When the landfill closed the university decided to run 100 percent through the transfer station; the waste would then be hauled twenty-five miles away. Problems arose with cardboard because it is so strong that it would not compress. This was not a small problem since cardboard makes up 20 percent of the campus waste stream. The operations and maintenance division was in charge of extracting the cardboard, which is automatically bailed (although it used to be manually extracted) and sold to the community recycling center for \$20 per ton.

The campus also recycles office paper (including high grade), glass, plastic, metals, and used oil. Rossman said the university is looking into starting a composting operation.

"Not everyone has a transfer station, but the cardboard can still be extracted at the buildings. We have been pretty pleased with [the program]. We save at the landfill and save money in the same process. We want to be a major force in recycling in this state.

and this helps us with our goal," said Rossman.

### Service Awards

Service awards may be an excellent idea, but they are nothing new to most physical plant departments. What is new is giving such an award to a tractor, saw, or portable pump.

Joe Kelley, director of physical plant at Louisiana State University, gave out such awards to the above mentioned made-in-the-U.S.A. equipment, and about 170 more items, for their long-term service. Some of the items were made around the World War II era and are still going strong. Kelley honored tractors; vintage Chevy, Ford, and Dodge vans and trucks; Northfield table saws, a Crescent planer, and a jointer that date back to 1944; and a sheet-metal bender, cutter, roller, and groover made by Chicago or Niagara Manufacturing Company, among many other winning items.

Maybe Kelley should get an award for learning how to make do with the equipment he has, while keeping a sense of humor.



**AN OLD SAW** — Joe Kelley points to a "service award" he has given to a table saw for 45 years of loyal service.

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## GOOEYS AND YOU

In the gold rush days of the early 1980s, every month seemingly spawned a major breakthrough in technology and launched a mountain of new product introductions. We were poised on the threshold of an exciting new era, one promising to help us work smarter and faster.

Along with many other famous misstatements (e.g., the check is in the mail, etc.) the full promise of computers has yet to materialize. One of many reasons for this anomaly is because today's technology is neither responsive nor intuitive. Our kids will not feel that way because they are growing up with technology, but us, well, we started late.

Users of the Apple Macintosh are somewhat closer to the promised land than are users of IBM-based systems. Why? Simply because Apple, early on, successfully pioneered something called the Graphics User Interface—abbreviated GUI and pronounced "goeey." GUIs conferred on computers what indoor plumbing supplied for society—gentrification.

At the risk of great personal danger, since I know Apple users take no prisoners in the war to defend their ambitious monarch, I assert that wherever serious business is conducted MS-DOS machine prevail.

That was true before and now with recent major improvements in two DOS-based GUIs, the statement is as good as chiseled in stone. Microsoft's Windows and IBM's OS/2 (version 1.2 with Presentation Manager) will define the look of operating systems well into the 1990s.

Each displays information in slightly different formats. Windows, something of a hybrid, combines text and graphics. While OS/2 employs icons depicting applications and commands. Both represent a quantum leap forward over the complicated, intolerant and drab C-prompt.

With OS/2, gone forever is the frustrating limitation of 11 character file names; file names now can be up to 256 characters long. Drop-down and nested menus in Windows and OS/2 simplify routine tasks like copy-

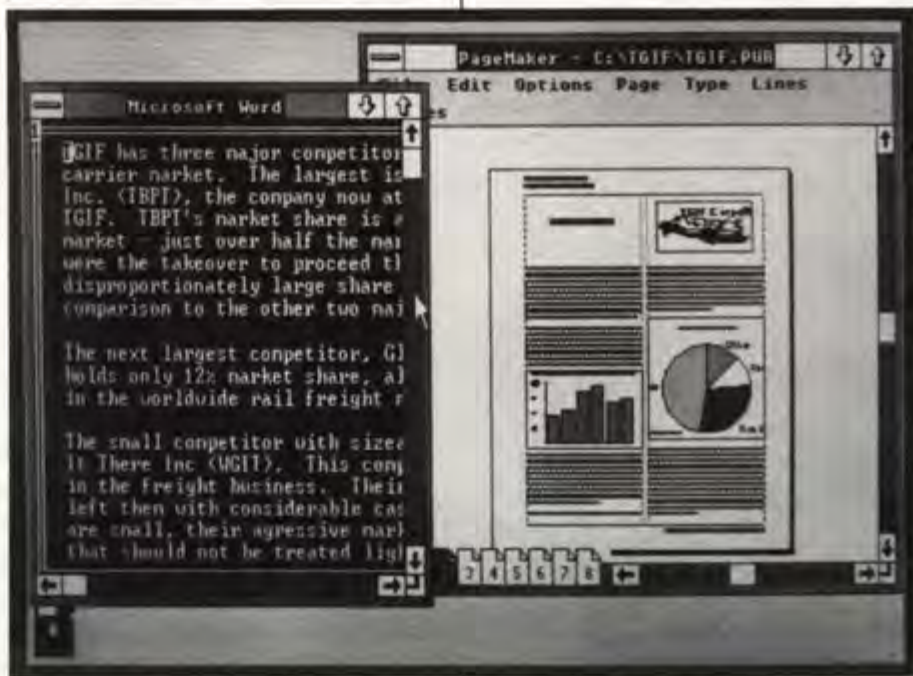
# Data Base Update

Howard Millman

ing, deleting, renaming files or formatting floppy disks. Using a mouse or the keyboard you select from a cornucopia of options; dialog boxes pop up to ask additional information or offer advice.

Context sensitive Help is always available. These new operating systems are as close to goof proof as is reasonably possible. Before you commit to a careless course you are warned of the consequences of your actions and asked, "Do you really want to do this?" How nice it would be to have that little voice vouchsafe everything we do! Or better yet, the actions of our colleagues.

Back to reality. How, you ask, will the introduction of yet another standard simplify life, isn't there enough variables to choose from already? That is exactly the point of this column—



Howard Millman is assistant director of facilities at Columbia University's Lamont Doherty Geological Observatory in Palisades, New York, and Nevis Nuclear Laboratory in Irvington, New York. He is also a freelance technical writer and frequent contributor to several national computer magazines.





Windows and OS/2 establish and contain standards. In order for programs to execute under either of these operating systems, they must adhere to guidelines set up by Microsoft and IBM. Thus, menus look the same no matter what application you are running, F1 always summons HELP, CTRL F4 always closes the active window. There's no need to memorize another set of rules every time you run a different program.

What does this mean to you? A lot less training time for one thing. Once

your staff is familiar with one program they will easily learn another. And another.

There's also an implied guarantee, an assurance of sorts, equating to a purchaser's protection program. I have heard from many teed-off managers who purchased programs that failed to perform as promised. They were not so simple to use that a "ten year old could run it." Well, maybe a ten year old could, but not adults.

If a program runs at all under OS/2 1.2 or Windows 2.1, that predicts its

compatibility with a complex background set of rules. That is the computer industry's equivalent of the Good Housekeeping Seal of Approval.

Of the two operating systems, migrating to Windows is somewhat easier. Since Windows is really a subset of MS-DOS programs, it can run either under Windows or under MS-DOS. This preserves your present investment in existing software—a definite crowd pleaser.

On the other hand, OS/2 is a totally new operating system that manages to remain compatible with DOS via a series of kludges. For sheer number of new features and conveniences OS/2 outmuscles Windows. One caveat: to use either system you must have a 286 or 386 based computer system with at least a forty-megabyte hard disk. If in the past you've heard some discouraging words about Windows and OS/2, let me assure you they probably were true. Earlier versions of both systems were riddled with problems, slow, and cumbersome. OS/2 version 1.2 and Windows version 2.1 correct many of their predecessors shortcomings. Remember, lemons ripen early, pearls take a long time. ■

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## Cogeneration

**Guide to Natural Gas Cogeneration**, Lelson E. Hay, Editor. Lilburn, Georgia: Fairmont Press, 1988. 521 pp., hardcover.

The National Energy Act of 1978 established a comprehensive five-part national energy policy. One of these parts, the 1978 Public Utility Regulatory Policies Act (PURPA) specifically encouraged the use of cogeneration in non-utility applications. Since that time, the application of this technique has become an area of intense and legitimate interest for colleges and universities. There are already many institutions of higher education that use, or plan to use, this method of energy production; many more will undoubtedly consider cogeneration in the future. APPA members are fortunate to have direct access to the first comprehensive publication concerning cogeneration prepared expressly for the academy (*Cogeneration: A Campus Option*, by Robert Goble and Wendy Goble, APPA, 1980). In addition, *Facilities Manager* has discussed cogeneration and reviewed books on the subject in recent years; readers are especially recommended to review Dr. Mohammad Qayoumi's excellent four-part series on electrical issues, which featured "The Cogeneration Alternative: Feasibility and Factors" in the Summer 1987 issue.

The American Gas Association sponsored the publication of *Guide to Natural Gas Cogeneration*; AGA is the national trade association that represents all but a few of the natural gas distribution and transmission companies that comprise the regulated gas industry in the United States. The editor of the guide is the chief economist and director of policy analysis for AGA, and has authored countless studies and publications about energy applications. In spite of the obvious propensity on the part of the AGA to promote the use of their product, the editor and the contributors of the various sections of the book have been careful to present their data and conclusions without overt bias.

This book has forty-one chapters arranged in eight sections; also included are several appendices that contain, among other items, a glossary of terms and a list of cogeneration equipment vendors. Section I includes four chapters that explain the advantages of natural gas-fired cogeneration; the authors stress the inherent property of natural gas to emit fewer sulfur oxide, nitrogen oxide, and particulates than similar coal or oil-fired systems. In Section II, eight chapters discuss economic and engineering feasibility analyses for proposed cogeneration facilities, including a brief discussion on project financing. Section III is devoted to natural gas prime movers; one of the six chapters covers steam turbines, while other chapters describe gas turbines and reciprocating engines.

The information contained in the fifteen chapters of Sections IV through VI is of

# The Bookshelf

special interest principally to the gas industry. Section IV describes the application of natural gas for efficient generation of electricity; the four chapters review the success this fuel has in applications involving electric utilities. In Section V, recent regulatory considerations affecting utility-size cogenerators are presented; in addition, the author indicates that the avoided costs of purchased cogenerated electricity are reasonable, and are not excessive as some critics from the electric industry have charged. Section VI describes various natural gas marketing strategies. Two case studies are included in Section VII; the second study, involving a gas turbine industrial application, discusses a system in the five megawatt range that could be of special interest to many APPA members. The final section on recent developments has a discussion on interconnection to the electricity utility grid; even though this chapter describes a relatively small cogeneration system, the bases of interconnection technology are presented and discussed thoroughly.

*Guide to Natural Gas Cogeneration* is another important piece in the puzzle of cogeneration. While certain sections of the book are written specifically for the natural gas industry, the balance of information presented is applicable to college and university settings. This book should be included in the resources collection of all institutions of higher education that are seriously considering cogenerating as an alternative or supplement to conventional energy purchases.

This book is available from Fairmont Press, Inc., 700 Indian Trail, Lilburn, GA 30247.

—John M. Casey  
Manager, Engineering Department  
University of Georgia  
Athens, Georgia

## Business Writing

**Persuasive Business Writing**, by Dr. Mary Cross. New York: AMACOM, 1987. 170 pp. \$14.95, hardcover.

Do you ever wonder whether your letters, reports, memos, and oral presentations do what you intend for them to do? An honest answer would have to be "yes." In Cross's book, *Persuasive Business Writing*, discusses the art of writing and how we can be better communicators.

The book is easy reading and short enough to be read in a few hours. How-

ever, it is filled with many ideas and concepts that will help to make each of us better writers. Also, the layout of the book is such that it can be used as an easy reference when one has a question about writing.

I recommend reading the entire book through and then, because of the easy-to-use layout, using it to refresh your memory. Routine use of the various formats and styles will prove to be a valuable tool for every writer.

As I read the book, I recognized many of the concepts Dr. Cross presented. Silently I thought to myself, "I knew that." But I also recognized that although I might have been familiar with the concept, I was not putting it into practice. For myself the book should be a regular reference—a tool to bring back those ideas and concepts that I should use regularly.

The book is divided into two basic parts, "The Art of Persuasion" and "Persuasion at Work." "The Art of Persuasion" opens with a discussion of the concept of Copythink, which defines three steps to improve the thought process in writing, selling, or persuading.

The first step of Copythink is to define your customers. Do we have customers as physical plant managers? Of course we have customers—all the people that use the facilities we manage. Also we have another customer we must consider. What about the vice president or the president who has to approve our plans and procedures? We must sell our ideas to our administrators to get funds or approvals. From that standpoint our "boss" is our customer.

Copythink helps define methods to make our presentations more effective for both those who use our services and those for whom we work. The first rule of Copythink requires that we know our customers and thereby give them a stronger incentive to do as we are requesting. Cross quotes Aristotle as saying, "Whatever quality the audience esteems, the speaker must attribute that quality to the object of his praise." Assessing the audience and meeting their needs is certainly not a new concept, but it is an essential and frequently neglected one. The first section of the book continues with a number of related ideas that individually or together will benefit anyone's writing ability or persuasive technique.

In addition to persuasion, the book considers several interesting thoughts such as the Gestalt Factor. The Gestalt Factor is a theory that says, "We all tend to perceive things in relation to the form, surroundings, or context in which they are presented." Therefore, a letter that is poorly typed or full of grammatical errors will not convey the same message as identical content presented in a neat, grammatical letter.

Another question the book poses is, "What level does your writing fall into?" Sixth grade, twelfth grade or graduate



school? Where do you want to fall? Calculating your Fox Index allows you to answer both questions. The author offers useful information for writing, plus some interesting concepts on communication.

Part One continues with ten rules for persuasion, three formats for persuasion and making the creative connection. Other styles of persuasion are also discussed.

The second section of the book applies the ideas and concepts presented in the first part. The idea of Copythink and rules of persuasion are put into practice and many different examples are given.

Writing persuasive business letters, memos, and reports is made easier by using the concepts and by following examples. The last chapters deal with sales letters and writing advertisements. These chapters are interesting, but may not be as directly applicable to plant administrators as the first eight chapters.

Overall, the book is easy to read and interesting; it will definitely add skill to your writing. I recommend it highly for those interested in improving their persuasive writing ability.

This book is available from AMACOM, 135 West 50th Street, New York, NY 10020.

—John D. Rulfs

Associate Director, Physical Plant  
Stephen F. Austin State University  
Nacogdoches, Texas

## Hazard Communications

**Hazard Communications Standard, An Implementation Guide**, by John W. Wells. Lilburn, Georgia: Fairmont Press, 1989. 149 pp. softcover.

An issue that will become more critical to physical plant administrators during the 1990s will be our management of hazardous chemical materials. The storage, use, and disposal of such materials will be questioned by not only our staff and the general campus community, but also the public living around our institutions. How we respond to this issue will be an important factor in our ability to effectively manage our departments.

Wells has written a guide to help administrators implement a hazardous materials communication program. The style of the book is similar to that of a cookbook with easy-to-understand instructions and sample forms to be used in the program. The book is not long, 149 pages including a glossary, and can be read in a short time. The book's organization leads to its clarity; the chapters are divided into the topics of: getting started, the written program, material safety data sheets, employee communications and training, labeling and posting, hazard determination, the laws, record keeping, and glossary of terms.

Each of the chapters is further subdivided into sections describing the back-

ground or need for the items discussed and directions on how to implement the program in your agency. The book can easily be understood by someone without any background in environmental health and safety.

While this is a new book, published in 1989, it does not provide much direction on how to implement the program through the use of a computer. Instead it relies on the use of paper records (or 3 x 5 inch index cards). This can be helpful to the small institution without the availability of a computer, and yet the larger institution could, I think, use the instructions to create their own data base program.

I do not suggest this book for reading by the directors of plant operations, unless you want the 'how to' background. The book should instead be read by the department's training staff, warehouse personnel, and the operations supervisors since they will be required to implement the program. The book could also be used as an audit reference to determine how your current program measures against the recommendations included in the book. I did not consider the book to be especially thought provoking, but then again, that was not the author's purpose.

This is the book to get if you want a clear cookbook on how to implement a hazardous materials communication and recordkeeping program. You may find that you will need to replace the book as it could become worn out through extensive use by your staff if they are charged with implementing such a program. I would really like to see similar books on other environmental challenges that we will be facing in the near future. Such topics could be: how to implement an operations and maintenance programs for asbestos, or how to implement an underground storage tank testing/monitoring and replacement program.

This book is available from Fairmont Press, Inc., 700 Indian Trail, Lilburn, GA 30247.

—William G. McGinnis

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## Computers

**Making Computers Work for Administrators**, ed. by Kenneth C. Green & Steven W. Gilbert. San Francisco, California: Jossey-Bass Inc., Publishers, 1988. 86 pp. \$12.95, softcover.

This booklet could easily be renamed "A Manual For Making Computers Work for Administrators" and should be a part of every administrator's library. The publication comprises eight sections, each covering definitive topics both in the administration and academic areas. Each section describes the current status that exists in most universities and colleges and then proceeds to offer suggestions for efficiency.

Continued on page 44



**HOW  
DO YOU MAKE  
THE MOST ADVANCED  
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**THE ANSWER IS "SIMPLE."**

JOHNSON



through the proper usage of computers.

The booklet's direction can be summed up in a quote from the first section, *The New Administrative Computing*, which states that "the future of campus computing resides not with one system but the integration of various systems, desk tops, minis, and mainframes. . . . The new computing gestalt focuses on the systems integration through networking to create a computing capacity that is greater than the sum of the parts."

This booklet may be ordered from Jossey-Bass Inc., Publishers, 350 Sansome Street, San Francisco, California 94104-1310.

—Norman Loat

Assistant Director, Physical Plant  
University of Winnipeg  
Winnipeg, Manitoba, Canada

### Continuing Education

**Effective Continuing Education for Professionals**, by R.M. Cervero. Jossey-Bass, Inc. Publishers, 1988. 160 pp. hardcover.

The author presents a succinct survey of continuing education for professionals beginning with an enlightening discussion of which occupations are to be considered professional. Many people tend to identify a professional as one who carries a briefcase and performs a single service that is highly visible in the community. The

reader will get an understanding of present day thinking regarding professionalism and professionalization.

A distinction is made between professionalism, a static state without continuing education to professionalization, a dynamic process based on continuing education. A model of professionals as learners is proposed. The model is based on theories and research from cognitive psychology. The reader should find this model useful in understanding the characteristics of professionals and the environment that influences their participation in continuing educational activities.

This survey includes a description of the major providers of continuing education for professionals. The prominent providers are universities, professional associations, employers, and private agencies. A five element planning model for education providers is presented. These elements make up a plan to analyze a provider's strengths and resources. There is also good discussion about strategies that providers use in relating to external institutions for developing programs. A model is developed to help understand program planner's use of various strategies.

The author explains use of seven types of evaluation questions commonly asked in continuing professional education. Most of the questions focus on what happened before and during the educational program.

Other questions focus on what occurred as a result of the program. There are many variables from inception to completion of educational programs that make it impossible to determine what caused program outcomes. The historical data about program outcomes is limited because the continuing education process for professionals is still in its infancy.

The responsibility for improving continuing professional education is placed on the individual educators. Cervero views the educators as researchers. Their aim is to understand the issues, uncover practical knowledge, and the process by which to use this knowledge.

I recommend this book to institutional administrators, educators, and professionals interested in continuing their awareness about continuing education for professionals. An interested reader should survey the historical background of the professions prior to Flexner's 1915 definition. The historical background will help the reader understand the professions in today's society.

This book is available from Jossey-Bass, Inc., Publishers, 350 Sansome Street, San Francisco, CA 94104.

—J.J. Lettiere

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