# Effective & Innovative Practices Award Winners: *Creativity and Practicality*


APPA's Effective & Innovative Practices (EIP) Award continues to highlight an ever-growing list of creative programs and processes that enhance and transform service delivery, lower costs, increase productivity, improve customer service, generate revenue, or otherwise benefit educational institutions. The five 2008 award-winning entries focused on the Facilities Condition Index; accessible landscaping; inspection by trades; individual and organizational excellence; and environmental conservation awareness.

Up to five EIP submissions are eligible each year for a cash award of $4,000, which is generously sponsored by Sodexo Campus Services. Entries can describe either a new program or significant restructuring of an existing program or process for success. APPA's Professional Affairs Committee, led this year by Kevin Folsom of Dallas Theological Seminary, selects the winning entries based on a point system. This year there were 18 entries from 16 institutions. The five successful schools received special recognition and a check at APPA's 2008: The Rise to Greatness conference in July.

To view the complete applications and summaries from previous years' EIP winners, or to learn more about how to submit an entry for the 2009 awards, please visit *www.appa.org/recognition/effectiveandinnovativepractices.cfm*.

# Montana State University

## FACILITIES CONDITION INDEX

By Victoria C. Drummond, AICP

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Efficient and cost-effective maintenance of buildings is a growing concern as the average age of buildings increases. More institutions are looking for maintenance audit methods to manage facilities operations, maintenance, and expansion. In 1992, Montana State University created a desktop database program - Facilities Condition Inventory (FCI) - to track the variable condition of campus buildings. MSU's FCI program provides an objective, consistent, systematic evaluation of the general condition and deferred maintenance profile of buildings and is a useful methodology in determining comparable condition assessments within a geographical area. After MSU shared the program and trained other university units and state agencies, Montana governing bodies began to rely on FCI reports when considering budget or resource allocations. In 2007, the value of the FCI program was further recognized and used as the fundamental methodology in response to a lawsuit claiming the state's public education (K-12) is inequitable, due in part to the condition of school facilities. MSU's dedication to refining and sharing the FCI program and its agency and legislative acceptance has enabled MSU to improve its public service to Montanans by its role in assessing the condition of state facilities from K-12 schools to institutions of higher education.

### INSTITUTIONAL BENEFITS

Periodic evaluation of the condition of facilities is essential for effectively managing facilities budgets, operations, maintenance, and expansion. A recurring assessment or audit of building conditions in a cycle that evaluates the entire campus, can provide deficiency data useful to governing bodies, administrators, and maintenance personnel.

MSU's FCI program is based on APPA's Model for Facilities Audits, the philosophy described by Harvey H. Kaiser in *The Facilities Audit: A Process for Improving Facilities Conditions* (APPA, 1993), and employs comparative cost data from a nationally recognized cost estimating system (*RSMeans*) to calculate deficiency estimates. Over time this regimented and systematic assessment of building conditions and FCI reports has provided deficiency details that directly improved funding and resource allocation decisions, improved the effectiveness of day-to-day maintenance operations, assisted administrators and managers in long-range capital planning, and informed prioritization of building renewal and deferred maintenance projects. The compilation of records provides a dynamic value of the physical assets and enables a realistic and objective view of the major campus facilities at any given time.

### UNIQUE CHARACTERISTICS OF THE PROGRAM

Efficient and cost-effective maintenance of buildings is increasingly important as funding for facilities is more difficult to acquire and construction materials and labor costs cause large construction projects to cost mega-millions. While other audit programs exist and are available, MSU's FCI program is a hybrid of overview information intended to be achieved using in-house resources with modest effort and cost. Qualities of the FCI program that make it a unique program are:

1. It utilizes an in-house inspection team of facility professionals, custodians, building occupants, and trades personnel to inspect and record a snapshot, or profile in time, of the building's condition. The team approach has played a vital role in the overall success of the FCI program's value. Management and professional trades people are invested in the process and the workflow outcomes of the audits. Team members provide the history of corrective actions, identify recurring issues, strategize potential solutions, and record


Montana State University

the results. The team approach is also unique because it involves representatives from numerous disciplines and each contributes professional expertise and building fluency during the audit, which all adds a valuable dimension to the inspection results.

2. The FCI reports calculate a deficiency ratio, or comparison of the cost of the deferred maintenance to the replacement value of the building (which can be used in determining obsolescence and considering replacement timelines).
3. The database generates a variety of reports that enables use of the FCI as a tool to better inform budget, operations, and planning decisions.
   - As a *budget tool* it can be used to solicit additional maintenance funding; can help demonstrate and forecast long-term resource needs; recognize and quantify the value of facilities as an institutional asset; identify and prioritize areas of greatest need; and record and illustrate net asset value improvement.
   - As an *operational tool* the FCI can be used to help identify, prioritize, and schedule maintenance projects; facilitate efficient use of resources; record and illustrate improvements; work order generation; and detect and reduce excessive or inefficient maintenance.
   - As a *planning tool* the FCI can be used to assist in capital planning; maintenance backlog management; workload management; project need prioritization; and long-range campus development or master planning.
4. MSU included flexibility in the program design so that the audit can also generate other inventories beyond the traditional FCI elements by having the inspection team note fire and building code compliance considerations and accessibility improvements that go beyond the traditional maintenance of existing conditions. The system can be amended (and has been at the state K-12 level) to include other general inventories such as classroom amenities.
5. To keep the program costs manageable, MSU includes only its major academic facilities in its FCI cycle, since performing the indepth FCI on relatively small buildings would significantly increase the human and financial investment on a per-square-foot basis without commensurate benefit.
6. MSU has extended the use of its FCI system to include auxiliary facilities, such as residence halls and dining facilities, at the request of the MSU Auxiliaries organization, for a comprehensive profile of the entire campus.


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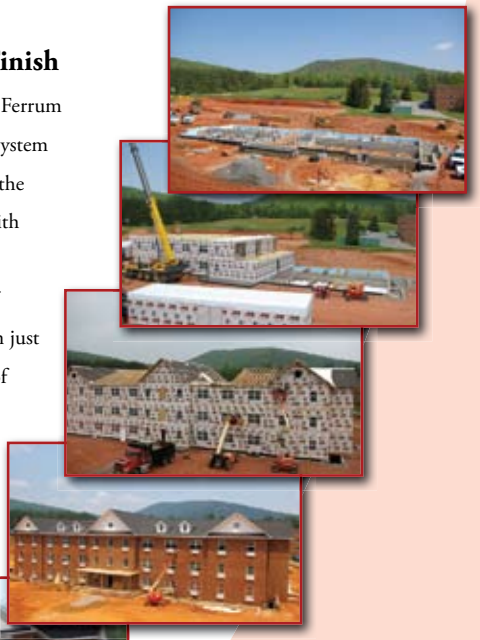

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***President of Ferrum College***

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**PORTABILITY AND SUSTAINABILITY**

Since its inception, the MSU FCI program has been freely offered to other state agencies in Montana. Annual training sessions have been broadened to speak to the increasing number of out-of-state users who have heard about the program from within their industry or from MSU staff networking at APPA and other conferences.

The MSU FCI program can be used by any facilities operation that wants to protect the unique qualities of their campus or buildings by systematically capturing a profile of the condition of their physical environment. The FCI program assists entities in preserving their valuable physical assets.

MUS's FCI program can be used by such a diverse group because it is simple to use. MSU did the research, custom development, and now produces the computer program as a desktop compatible system, so it is intended to be portable and *turnkey* for all the users. The FCI program's value is that, consistently executed and properly employed, it can be used to better inform building operations, maintenance scheduling, financial decisions and budget processes for an entire campus of buildings at a modest resource/cost investment.

**DOCUMENTATION AND BENCHMARKING**

The MSU FCI program has been refined and operational for four cycles (at MSU, a cycle covers three years of auditing one building per month). Collectively, the cycles established an evolving profile of the buildings, beginning with a baseline assessment. The FCI audit prompts a calculated deficiency ratio and replacement value for each cycle, which takes into consideration renovations, maintenance, and equipment replacements that have occurred since the previous audit. This cyclical record of maintenance and improvements also establishes a defensible position for appealing to the university community and governing bodies when buildings, particularly historic buildings, need adaptive reuse renovations. The identified campus deferred maintenance ratio can be used as a strategic benchmark to evaluate operational effectiveness.

This type of long-term perspective is most effectively created by the use of a systematic and regular assessment of institutional assets by a team of professionals experienced in building performances and deficiencies. MSU's FCI program provides a plethora of data useful for setting benchmarks and planning future campus development. In addition, projects identified through the FCI process are included for funding consideration in the Capital Projects Program request for every legislative session.

SAN FRANCISCO STATE UNIVERSITY

# San Francisco State University

## ACCESSIBLE LANDSCAPE

By Brenda Lee

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In the early 1990s, the Department of Facilities & Services collaborated with a landscape architecture firm to develop a National Endowment for the Arts (NEA) grant proposal to explore the concept of Accessible Landscape. The proposal was funded and the Accessible Landscape project was started to create landscapes that would meet the needs of all members of the San Francisco State University community. We envisioned landscapes that would transcend the mere implementation of ADA accessibility code requirements, as the separate accommodations mandated by ADA often have the undesirable effect of segregating users. The goal of the Accessible Landscape project was to create universally accessible landscape that promote inclusiveness by seeking solutions that integrate the competing needs of both the disabled and the general population.

As a result of our efforts, the campus environment has become more welcoming, with a user-friendly landscape. We have enriched the curriculum of participating colleges by introducing Accessible Landscape into classroom discussions and projects. We have an active design outreach program through our website, and we have been invited to participate in international design


San Francisco State University

conferences and to publish our results in universal design publications as far away as India.

**INSTITUTIONAL BENEFIT**

This ongoing transformation of our grounds into a barrier-free zone has not only improved the appearance of the campus, but has also contributed enormously to institutional benefit in the following ways:

*Social Benefit for All*: The most obvious beneficiaries of these accessibility projects are the disabled on campus, whose special needs no longer limit their access to those common areas that have undergone 'inclusive' design change. Inclusive furniture such as the Open Bench adjusts to accommodate wheelchair-bound persons, while Sound Web audible cues assist the visually impaired to orient themselves on campus.

The general campus population also benefits from these changes. The elimination of regulation bars and rails along regraded pathways helps to beautify all of these areas. The musical and nature sounds emanating from the Sound Web offer an ambient aural treat to passersby. Height-adjustable furniture provides comfortable seating for different heights.

*Educational Benefit*: This project has instructional and practical value. Students are involved in the entire process including initial brainstorming, interacting with focus groups, conceptual designing, construction modeling, project scheduling and management, publication in a variety of formats, and speaking before classes and professional associations. In brief, we present them with an opportunity to apply what they've learned in the classroom to real-life experience.

*Multidisciplinary Collaboration:* We have collaborated with faculty and students from the Department of Design & Industry to develop ideas and prototypes for seating designs, and drawn on the talents of our Engineering Department instructors and students to design and build programmable logic circuit boards to provide the many features of the Sound Web. Department of Special Education experts transformed our view of appropriate placement for the audible landmarks, resulting in much greater effectiveness.

**INNOVATION AND CREATIVITY**

The task of designing an all-accommodating, multi-featured product is one that demands imagination, creativity, and problem-solving skills. Faculty, staff, and students dedicated to the Accessible Landscape projects have exercised their collective know-how to conceptualize, develop, and manufacture products that are innovative and unique.

We take great pride that the Benches and Sound Web were collectively developed by the university community. The process of innovation does not cease at project completion, as we constantly seek to



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improve upon existing designs. Our Universal Seating Design Studio program not only guided the original Bench concepts through four design generations, but formulates new ideas each year as new students seek to enhance the project.

The project's newest invention, the Sound Web audible wayfinder, demonstrates the ingenuity of San Francisco State University's engineering students. Beginning with wind chimes, the project now offers solar powered playback devices working 24/7 for our community. Careful attention was given to the selection of sounds used to indicate each type of landmark. A variety of sound clips from nature, music, and industry were tested in focus groups and in the field, for elements of clarity, likability, obtrusiveness, and resonance. The audio samples that won strong user preference were then paired to corresponding campus location types, for instance, the sound of wind chimes is associated with major pathway intersections, percussion rhythms mark the location of student support facilities, non-native birdcalls indicate primary entrance points to the campus, etc. Staff who conduct campus Orientation and Wayfinding training familiarize their clients with the function of these devices.

**PORTABILITY AND SUSTAINABILITY**

The idea of creating inclusive spaces has universal applicability. We receive inquiries from around the world regarding implementation, and our students are carrying this experience with them to their next professional roles. Our colleagues are invited to join us in raising the standard for inclusiveness in public landscapes. This process can be replicated at any public and private place such as educational campuses, business parks and hospitals, recreational spaces, and airport and transit venues.

We are in the process of posting detailed construction information as open source material for others to use. Individual help is also made available. We have provided Sound Web design information to a user in South Carolina seeking to adapt the idea to a neighborhood.

Our standard is to utilize the most sustainable technology available in all our projects. For example, solar power is used for all electrical power requirements, making these items affordable for developing countries as well. Solar power is a cost effective alternative to traditional sources of energy that are rising in cost. Material choices are being guided by environmentally responsible objectives to maximize recycled content and recyclability when the product becomes obsolete. Our standard is also to render the devices maintenance-free to the degree possible, and sturdy enough to resist and discourage vandalism.

**DOCUMENTATION AND BENCHMARKING**

Prior to implementation, each project under Accessible Landscape actively seeks customer input during the evolutionary phase of a design. Focus groups, comprising a broad selection of staff and students from the university's administrative and academic departments, are invited to make recommendations that add value to the function and utility of the end product.

Analysis of accessible designs occurs during product conceptualization and testing. Design strengths and weaknesses are identified and analyzed, and these undergo several refinements until they are deemed satisfactory.

Project documentation for the most current Accessible Landscape project, the Sound Web, is posted on our department's website at *http://plopws.sfsu.edu/soundweb*.

The benchmark for the Accessible Landscape project is continuous improvement of the comfort and user friendliness standards for our university grounds, while making maximum use of on-campus resources to accomplish this goal. These objectives have been fulfilled, even as we constantly move the goalpost upward and make the process of meeting our goals an ongoing process.


# University of Missouri

## INSPECTION BY TRADES PROGRAM

By John Neal

*John Neal is associate director for construction management at the University of Missouri, Columbia, MO; he can be reached at* nealj@missouri.edu. *This is his first article for* Facilities Manager.

The University of Missouri, Campus Facilities-Planning, Design, and Construction's Inspection by Trades Program is designed to utilize skilled trades personnel from various campus facilities departments to review, or inspect, the work of contractors. The program utilizes expertise already on staff to inspect work *during construction*. MU employees with various skill sets work with our construction project managers on site; they check for workmanship issues, application of materials, equipment access, maintainability, and overall work quality.

The Inspection by Trades Program is completely voluntary and is succeeding well beyond our expectations. Trades personnel are enthusiastic about the opportunity to be involved, construction project managers welcome the help, and contractors like the fact that it helps them avoid costly rework.

Not only have we seen improvements in the level of craftsmanship and work quality, but we're also gaining meaningful improvements in teamwork and collaboration. Trades personnel who may have previously felt "stuck" with the finished product are now engaged and providing excellent feedback. As a result, we're a much stronger team delivering better projects.

### INSTITUTIONAL BENEFITS

Are comments about poor work by contractors common within your facilities organization? Do the people who operate and maintain your facilities feel that everything they "fix" is something the contractor did wrong? Deficient work by contractors can be a significant problem. Despite the best design and materials, the best contractor and the best of intentions, all can be for naught if installed work is below par. The question of deficient work by contractors becomes, "What can I do with the resources I have?"

This question was at least partially answered last year as a result of a routine shop meeting in which insulators in Campus Facilities Energy Management department voiced concerns to their supervisor about contractor workmanship. They were seeing things on completed projects they felt should have been pointed out and corrected prior to acceptance of the project. The session led to a meeting with the associate director of construction management, and the Inspection by Trades Program was begun.

Benefits of the Inspection by Trades Program are many, but first and foremost is that quality work is being completed in a craftsman-like manner. Nothing can spoil a good design quicker than poor workmanship.

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University of Missouri

**INNOVATION AND CREATIVITY**

This program is unique in that our inspection efforts and level of construction quality have been raised without adding staff. The program is streamlined, in that inspections occur without the involvement of construction management personnel. Inspectors are coached to be as critical as they wish and to log whatever comments they feel appropriate in a binder maintained in each construction manager's office. Each construction project manager reviews the inspectors' comments and, if in variance with requirements, directs the contractor to correct the deficiencies. All communication with the contractor is through the construction project manager, allowing inspectors to avoid uncomfortable or confrontational situations.

Alternating biweekly inspections are conducted by two two-person teams of in-house construction trades staff, a schedule that allows additional construction work to be performed without "getting too far ahead." Four different inspections each month by two different teams maintain a fresh inspection perspective on ongoing work while maintaining consistent scheduling.

Additionally, Energy Management insulators, testing and balancing crews, and controls personnel perform as-needed inspections near the end of a project when in-house testing, balancing, and controls work normally occurs. These crews use the same inspection forms and log their comments in the same special inspection binder used by the in-house construction trades.

**PORTABILITY AND SUSTAINABILITY**

Organizations with in-house staff with expertise in certain crafts can utilize variations of the Inspection by Trades program. Whether personnel are plant-operations staff, maintenance staff, or in-house construction trades, all have first-hand experience in what does or does not work well or causes problems. Additionally, in-house staff usually possess a better sense of maintainability, equipment access, etc., that is easily achieved if discussed early in the process. Putting expertise in the right place at the right time pays big dividends in achieving the level of quality desired.

A constant search for crafts expertise in our organization is not only bringing about increasing interest in the program among crafts people, but is also allowing the program to expand and develop over time. Craftsmen who were formerly skeptical now want to be involved in this extremely low-cost, low-risk, easily started and maintained program at MU.

While quality construction work is the primary goal, a number of other benefits are being realized. Participation in the program is strictly voluntary, and the craftsmen involved are motivated and possess a positive, can-do attitude. As a result, teamwork and collaboration abound, along with camaraderie and support among internal departments. Early negativity has

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been replaced by constructive feedback. Trades people know that their expertise is valued and their concerns taken seriously, which results in better teamwork and better projects.

Funded through recharge fees, the program is essentially an extension of Construction Management staff, with excellent acceptance among campus customers. Staff are gaining first-rate inspection expertise, while at the same time freeing up the time of the construction project manager. Inspection costs are more than offset by improvement in the level of workmanship and the reduction in rework.

**PROGRAM ANALYSIS AND DOCUMENTATION**

As two major projects near completion in which inspectors have been involved, we've found that construction project managers — who typically must deal with immediate construction issues and can devote little time to work-quality control — now take comfort in knowing they have help. Comments by inspectors are reviewed by the construction project manager, who both follows up with the contractor for corrective action and gets back to the in-house trades inspectors about the corrective action taken. In many cases, an inspector may simply note "All looks good; no follow-up required" in the inspection binder.

With project work being scrutinized and documented it is abundantly clear in the first couple of projects completed through the Inspection by Trades program that contractor rework and defects have been greatly reduced and the construction quality raised.

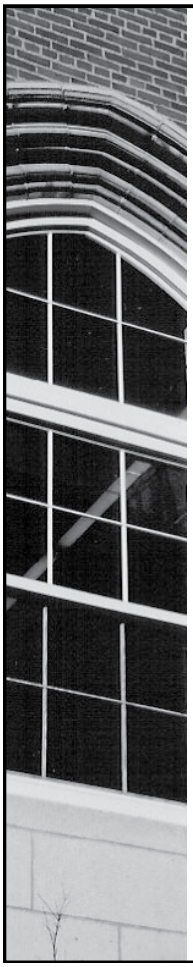
At face value it would seem that contractors would be reluctant to engage in an inspection program conducted by tradespeople. On the contrary, feedback from contractors has been overwhelmingly positive. Knowing the expense of rework, they welcomed the opportunity to identify and correct problems early, before they become huge, costly punchlist items. Briefed on the program at the beginning of each of the two projects, contractors knew what to expect and actively embraced and participated in the process as a way to control costs.

The Inspection by Trades program has been in place just under two years and has been well-received by both campus facilities managers at all levels and by cost-conscious campus customers to whom no charge is made for the quality control and cost-reduction the program provides.

Planning, Design & Construction continues to expand the Inspection by Trades Program and, as the work load dictates, will continue to utilize all resources available to reduce costs and improve construction quality.

## 2009 Award Nominations Open

Nominations are now being taken for APPA's 2009 institutional and individual awards: Award for Excellence, Effective and Innovative Practices Award, APPA Fellow, Meritorious Service Award, and Pacesetter Award. The deadline for consideration for the 2009 awards is **January 30, 2009**. However, award submissions are being accepted year-round. Awards submitted after January 30, 2009 will be held for consideration in the 2010 award cycle. Visit *www.appa.org/recognition* for more information or to apply.

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# Union College
## EXCELLENCE PROGRAM

By Loren T. Rucinski

*Loren Rucinski is director of facilities and planning at Union College, Schenectady, NY; he can be reached at* rucinskl@union.edu. *This is his first article for* Facilities Manager.

Union College is a small undergraduate residential institution in Upstate New York, concentrating in liberal arts and engineering. The college has been in existence since 1795 with an enrollment of 2,100 students, and a campus containing 105 buildings on 130 acres of land, bordered on all sides by the City of Schenectady.

**THE PROBLEM**

The Facilities Services Department at Union College needed a change. Maintaining a campus consisting of buildings which were (on the average) 85 years old, many systems were antiquated, and emergency repairs and failures were common. With the limited funding available for asset renewal, the facilities group became a reactive organization. Scheduled maintenance was consistently interrupted by another unplanned situation. The work was always completed with a high degree of quality by a talented facilities staff, but with so many issues, efficiency was not always emphasized, and record keeping was sporadic.

The other challenge on daily operations was the dramatic increase in the number of buildings and square footage that occurred at Union from 1998 on to present day. Very few FTEs were added to the ranks to help maintain the additional 48 percent more buildings and 33 percent more square footage that was added to the Union campus. This put a big burden on an already underfunded and understaffed Facilities group.

However, the staff members in the Facilities Department are a dedicated group of employees with many years of service to the college. The average tenure for all facilities employees is over 14 years, with the longest single staff tenure being over 44 years.

What could be done to energize the department, gain efficiencies, and engage the staff? After some discussion with the vice president of finance and administration, the management staff decided that a comprehensive program would need to put in place that would identify goals which would in the end, improve the departments efficiency and enable it to manage the challenges

Union College

it faced. We also decided that in order for the program to be successful, it should *not* be dictated by management but should have ownership from the bottom up, and many cases be developed by the very same people who where "in the trenches" on a daily basis. We named the initiative the **Excellence Program**, and realized that improvement would not happen all at once, but it would happen in baby steps, getting a little better each day.

#### EXCELLENCE PROGRAM MISSION STATEMENT

The basic mission of the Facilities Services Department is to effectively perform all stewardship duties through a planned and thoughtful caretaking of the campus facilities. This responsibility, which is taken very seriously, includes providing a safe, comfortable environment for students in an atmosphere that is conducive to learning.

Furthermore, it is the responsibility of the Facilities Services Department to maintain the existing campus, and facilitate the creation of new buildings, equipment, and campus areas that can be utilized by the Union College faculty and staff to provide the appropriate support of the college's educational mission.

Emphasis on customer satisfaction is paramount to the Facilities Services daily work philosophy.

To support the department's basic mission, the concept of the Excellence Program was conceived. In the simplest terms, the program is defined through the following goals:

- Strive to become a little better each day
- Improvement each day, no matter how small, is a positive direction and even small improvements are cumulative, and over time, provide results that can be measured and built upon to increase the level of stewardship at Union College
- Identify, emphasize, and build upon department strengths
- Continuous communication through staff input
- Continuous training
- Positive feedback
- Consistency
- Change is a good thing

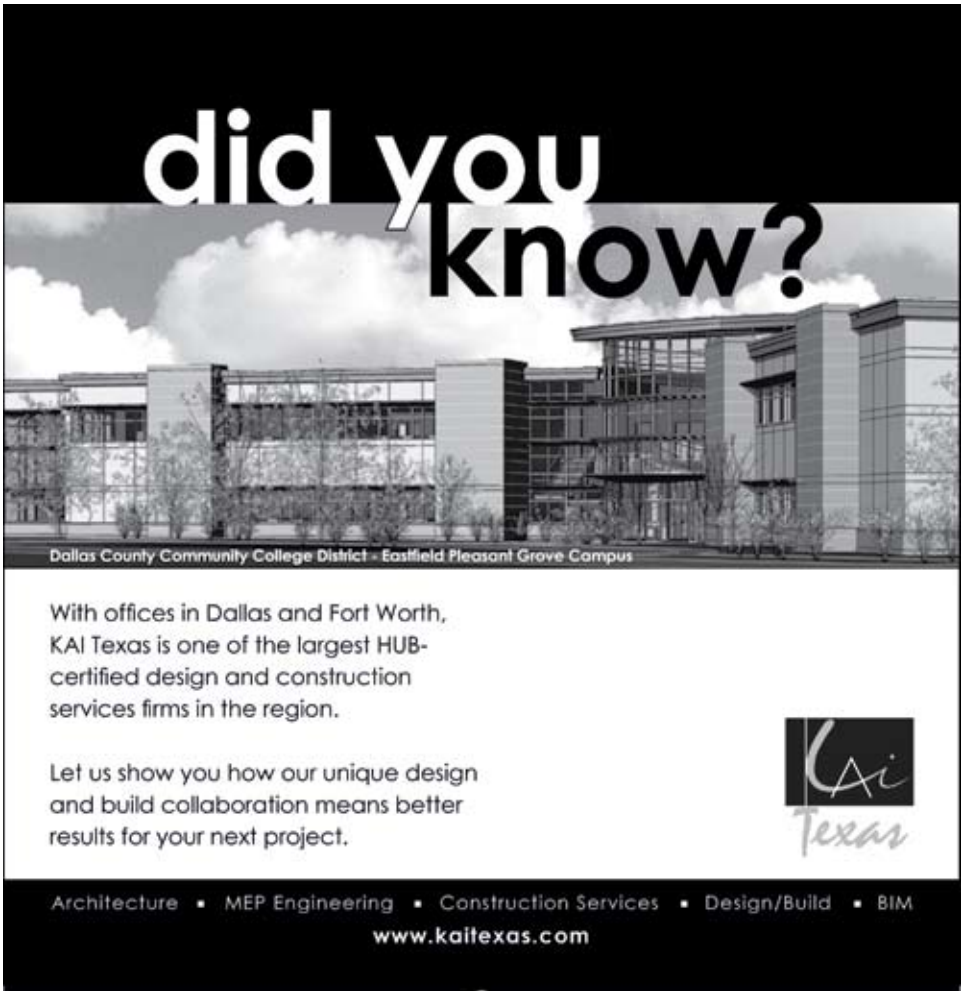
#### CHANGE MIGHT BE A GOOD THING BUT IT DOESN'T COME EASY

At first the reaction to the Excellence Program was mixed. Many staff members were open to the idea, some were on the fence but went along because they knew they should, and a small but vocal percentage of the staff were not about to buy-in.

The non-believers spent a fair amount of time lobbying with the rest of the staff not to accept the program. A few made the point that they wouldn't even greet the management staff if they met in a corridor. We heard things like "why try to fix something if it's not broken?" or "leave us alone and let us do our work." Granted, the staff members that would not buy in to the program were a small percentage of the 110 members of the department. But a few loud voices can slow down the momentum if you let them. However the more we heard, the more were convinced that changes were needed. The non-believers were waiting for us to give up, hoping that this would just be another idea from management that would eventually fizzle out.

#### THE WORK ORDER SYSTEM

Probably the single most important improvement to the department and its ability to perform facilities management responsibilities on campus was the development of a new Web-based work order system. The staff had identified many obstacles they felt were keeping our department from attaining its goals. We felt that many of those obstacles could be addressed through a good system customized to our needs. We felt it crucial to the program, and to the success of the work order system, that the staff be involved in designing the system.



Every campus community member who puts in a work request is contacted automatically by the system, and can inquire as to the status of their request. They are also notified by the system when the work has been completed.

The system is used by all supervisors and managers to prioritize and schedule work orders for planned maintenance.

The system is now used as a tool for objective evaluation for all hourly staff using the data collected throughout the year. Information such as actual hours worked vs. estimated hours, number of work orders completed (tied to productivity), number of work orders initiated (tied to initiative) can be benchmarked against shop averages and departmental averages.

**RECOGNITION**

One of the issues the staff brought up was that of appropriate, meaningful recognition. Our management team has the philosophy that you can never have enough opportunities to give a staff member a pat on the back. While that works on the day-to-day front, we thought it would be good to recognize their contributions as a whole. Longevity of service seemed to be a good way of doing this.

We compiled the data on our staff, and grouped them from 1-3 years, 3-5 years, 5-10 years, etc., all the way up to 40+ years. At one meeting we produced a slide show showing old photos of how the campus looked when the staff member of the longest years started working at Union. After the slides, we handed out pins showing the years of service in Facilities with a garnet crystal stone (Union's color) to each staff member starting with the newest and ending with the longest, announcing their names individually, graduation-style. At that point, the few "non-believers" were converted.

**THE EXCELLENCE PROGRAM TODAY**

The program continues, usually with a meeting each month that either has a training component, or we use it as a vehicle to communicate to the entire staff information on topics such as what is happening on campus in the future that might affect them.

We have made some great strides as a department thanks to this program, and we have been able to provide improved service to the campus community. The program will be ongoing. We still have strides to make, but we truly feel that we have gotten a little better each day.

In summary the Excellence Program has changed how we at Facilities Services do business, maintain the campus and interface with our customers in the campus community. The staff members are feeling good about themselves, are working as a team, and realize the importance of their work. The community has benefited from the improved scheduling and immediate communication.

# West Virginia University

## WVU ENVIRONMENTAL CONSERVATION AWARENESS NOW (WE CAN)

By Barbara Angeletti

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West Virginia University **E**nvironmental **C**onservation **A**wareness **N**ow (**WE CAN**) is an environmental awareness educational campaign. The following activities were features of the campaign:

- Light switch covers reminding building users to turn out lights put on all light switches.
- Posters reminding building occupants to recycle and conserve placed in buildings.
- Mouse pads that printed with the reminder to turn off electronics distributed to students, faculty and staff.
- WE CAN presentation given to incoming freshmen, faculty senate, staff council, the residence hall association, all housing and dining services staff, all facilities staff, extension and 4H groups, etc.
- WE CAN lightbulb exchange—switching incandescent bulbs for compact fluorescent lamps.
- WE CAN sponsored the Ecolympics Challenge. Residence halls competed against each other for a prize of their own choosing. The residence hall that conserved the most energy


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and recycled the most, per capita, was declared the winner.

- Recycling—Altogether, the WE CAN Ecolympics resulted in the recycling of 10.2 tons of paper in a five-week period from the residence halls alone. In addition, 3,465 pounds of No. 1 plastic bottles were recycled, totaling 58,905 plastic bottles, and 539 pounds of aluminum cans, or 9,163 cans.
- Energy Savings—Summit Hall achieved the greatest energy savings, a 27.7 percent reduction of energy use.

**INSTITUTIONAL BENEFITS**

WE CAN addresses the interests of those who are seeking not just solutions to the global warming crisis, but also ways of living greener. Most students care little about the dollar amount spent by WVU in the delivery of the services they expect in return for their tuition dollars. They do, however, care about decreasing the carbon footprint of WVU. From the perspective of university administration, saving hundreds of thousands of dollars a year in utility costs creates an undeniable argument for support of the campaign. Few can argue with the simple, yet powerful message of conservation.

The basic message of WE CAN is "please recycle and conserve," and light switch covers reminding building users to turn out the lights were put on all light switches. Posters reminding building occupants to recycle and conserve were placed in nearly every building. Mouse pads that are printed with the reminder to turn off electronics were distributed to students, faculty and staff at various student fairs. The WE CAN presentation was given to incoming freshmen, faculty senate, staff council, the residence hall association, all housing and dining services staff, all facilities staff, extension and 4H groups, and various other groups that made a request. WE CAN hosted a lightbulb exchange—switching incandescent bulbs for compact fluorescent lamps—which was not limited to only the WVU community, but was open to the greater Morgantown community as well. This allowed WVU to emerge as a leader in the conservation effort, and set the example for all other higher education institutions in the state of West Virginia.

The basic message of WE CAN is "please recycle and conserve," and light switch covers reminding building users to turn out the lights were put on all light switches.

**INNOVATIVE QUALITIES OF THE PROGRAM**

As a way of raising awareness about conservation and recycling, WE CAN sponsored its first Ecolympics Challenge. Residence halls competed against each other for a prize of their own choosing. Whichever residence hall conserved the most energy and recycled the most, per capita, over a five-week period in October-November 2007, would be declared

| Project: | **Ecolympics Dorm Challenge** | | | | |
|---|---|---|---|---|---|
| | Generation Fuel Not Burned equals 514 Barrels Crude Oil* | | | | |
| | Saving 285588 kilowatt hours of electricity is also equivalent to:** | | | | |
| | Eliminating the pollution from 39 cars per year or planting 82 trees per year. | | | | |
| | | Utility Savings | Environmental Savings From Electric Reduction in lbs. | Environmental Savings From Gas Reduction in lbs. | Environmental Savings Total in lbs. |
| | MCF savings | 0 | | | |
| | kWh savings | 285,588 | | | |
| | KW savings | - | | | |
| | CO2 Savings (Greenhouse gases) | | 579,556 | - | 579,556 |
| | SO2 Savings (Acid Rain) | | 4,477 | - | 4,477 |
| | NOX Savings (Smog and Acid Rain) | | 2,017 | - | 2,017 |
| | CO Savings | | 29 | - | 29 |
| | Particulate Savings | | 183 | - | 183 |
| | Hydrocarbon Savings | | 0 | - | - |

the winner. In order to keep everyone thinking about sustainability, WE CAN hosted a different activity each week during the challenge. A trivia quiz was posted on the website, and whichever residence hall had the most participants per capita won extra points in the challenge. A scavenger hunt was conducted during the final week of the challenge, with the residence hall that housed the winners getting extra points for the challenge. Individual prizes were given to the winners of these activities as well.

With respect to energy conservation, points were assigned to the ten teams that covered a range from one to ten—ten being awarded to the hall that conserved the most energy and one to the hall with the lowest conservation numbers. October energy data was compared to that of the previous month of September, and a percentage difference was calculated for each residence hall. Based on the point system, whichever hall earning the most points overall would be declared the winner.

The WE CAN Program allows for expansion into other aspects of university operations, e.g., transportation, purchasing, construction, etc. Because of intense marketing, the WE CAN logo is identifiable across campus, so using it to brand other green initiatives not only makes sense, but gives those initiatives a head start through brand identification.

173+ trees saved
126.25 barrels of oil saved
71,400 gallons of water saved
53,981 kWh saved

Aside from the obvious environmental benefits of this program, the greatest overall benefit is that students continue to recycle following the challenge, which was the overall goal of the WE CAN Ecolympics at the outset. Clearly, a 27.7 percent reduction of energy use for a residence hall is an incredible accomplishment. The students, through an organized effort, modified their behavior to conserve energy.

The total environmental result of the WE CAN Ecolympics as calculated by the DOE's energy star calculator is as follows:

The input received from everyone involved while formulating the program, during its application, and upon announcement of the results, was overwhelming positive. The success of WE CAN validates the effort of the program and generates hope for a greener future.

**PORTABILITY**

This effective and innovative practice is an excellent example of a practice that can transfer directly to others. The WE CAN Program and the Ecolympics Challenge can be exported to and applied by other educational institutions with very few, if any, changes.

With a few tweaks to the promotional materials, this entire practice can be ready to use by our colleagues in APPA.

**RESULTS AND BENCHMARKS**

Altogether, the WE CAN Ecolympics resulted in the recycling of 10.2 tons of paper in a five-week period from the residence halls alone. In addition, 3,465 pounds of No. 1 plastic bottles were recycled, totaling 58,905 plastic bottles, and 539 pounds of aluminum cans, or 9,163 cans. This equals 68,000+ bottles and cans that were diverted from the waste stream. The environmental benefits of recycling the paper, plastic and aluminum are as follows: