



**At Harper College,
Green Initiatives are a
Cost-Benefit Analysis**

Stewards for **SUSTAINABILITY**

By J. Mark Lanning

For the past decade, academic institutions have made significant strides toward sustainability—creating greener facilities, and educating and engaging their students in the process.

While many four-year colleges have budgets for programs such as solar electricity, biodegradable food packaging, and other endeavors, community colleges have approached environmental stewardship from a slightly different path. With budgets tight, any green initiatives need to be backed, first and foremost, by a compelling economic argument.

Harper College in Palatine, Illinois is a 180-acre campus about 30 miles northwest of Chicago. Established in 1965,



Harper College, Palatine, IL. Courtesy dept.harpercollege.edu/marketing/services/photos/html.

the college serves 16,000 students, offering associates degrees, certificates, and continuing education classes.

With less than 10 percent of Harper's funding coming from the state, student tuition and property taxes do not allow for costly spending on sustainability initiatives. Priorities are set according to which activities have a zero-net cost, a cost savings, or a near-term return on investment.

From water usage to waste management and energy consumption, Harper College has focused on key green initiatives that will save the school money while at the same time setting it on a green path to the future.

CONSERVING WATER, INSIDE AND OUT

Harper College is committed to saving water, both inside its facilities, and across its landscaped open spaces.

Over the past several years, the physical plant department has replaced old toilets and urinals with auto-flush units. The toilets are set to 1.6 gallons per flush, and the urinals to .6. Dirk Heid, maintenance supervisor, says the initiative has made a significant impact. "We now have auto-flush units in over 90 percent of our bathrooms. In addition, auto-flush toilets have reduced maintenance costs."

The Harper College food service is also looking to save water by purchasing a water-efficient, energy-efficient dishwasher. However, because the food service is a retail facility with a break-even business plan—not a dining hall with a budget tied to predictable meal contracts—the dishwasher purchase will have to wait for the next renovation, says John Filler, the manager of dining and conference services. Meanwhile, says Filler, staff members are encouraged to keep tabs on running faucets

as they prepare and serve food, and clean up after mealtimes.

Outdoors, the campus irrigates only 6 percent of its landscaped areas, and sprinkler usage is timed and kept to a minimum. During the hottest months, the roads and grounds section selectively uses watering trucks to water grass and planters. The landscaping team has planted hardy perennial plants rather than annuals, in an effort to save water and costs.

Campus Horticulturist Elissa D'Amico has led an effort to use native plants, such as decorative prairie grasses, that are drought resistant and need minimal watering. Native grasses also serve to populate bioswales—drainage ditches—situated near parking lots to capture automotive pollutants and silt.

The college is planning to install water submetering in the near future, to ensure that water usage is optimized both inside campus buildings, and throughout its landscaped spaces. Submetering will allow the physical plant team to quickly identify and rectify any water waste, conserving resources and keeping the college's water bill in check, according to Bob Pellican, Harper's utilities supervisor.

OPTIMIZING WASTE, IMPROVING RECYCLING

Although Harper College has been recycling for many years, in 2009 the institution's physical plant department decided to make some equipment changes, which over the next three years resulted in a 25 percent improvement in the college's recycling rate. The changes also dramatically reduced the school's overall waste removal costs by approximately \$15,000 annually.

For several years, the college was using an open-top dumpster



and two trash compactors, spending about \$600 per week to have trash picked up. “The problem, says Nancy Savard, logistics supervisor, “was that *everything* was going in the dumpster—cardboard, paper, bottles, and metal, requiring frequent trash pickups.”

Savard says that in many cases, recyclable cardboard was ending up in the open-top due to lack of recycling awareness. The school had a small cardboard compactor, but it wasn’t large enough to handle the amounts required, and it was just too easy to pitch the cardboard into the dumpster.

In 2009, Savard’s team made some fundamental changes in the school’s waste equipment configuration. They eliminated the open-top dumpster, and switched over to three trash compactors. And, since recyclable cardboard makes up a huge percentage of waste volume, they purchased a high-capacity cardboard baler.

The reconfiguration has been great for several reasons, says Savard. “We now have no open-top dumpster, so there’s no temptation to put cardboard in the trash stream (it’s logistically difficult to put cardboard into the trash compactor). This allows us to cut our trash pickup costs dramatically.”

The cardboard, meanwhile, is now kept completely separate. It is compacted and baled in a small-footprint, top-loading baler that is capable of creating large, recycler-friendly bales of over 800 pounds. “Our recycling processor prefers larger bales; it allows them to come less frequently and garners them a better price when they sell it,” says Savard. “Our cardboard recycling has increased significantly: In 2011, the college recycled 48,814 lbs. of cardboard. That increased to 49,329 in 2012.”

Introducing compactors and a cardboard baler has made a huge difference in overall waste removal costs. Before, the school was paying approximately \$50,000 a year in weekly trash pickup costs. Now, it is paying approximately \$35,000, with pickups just once or twice per month.

CONSERVING ENERGY

Another way Harper College is promoting sustainability, while also saving money, is through rethinking its approach to energy consumption, and reducing its carbon footprint.

Each time the college remodels or upgrades a building, Physical Plant uses the change as an opportunity to install light sensors in offices, classrooms, and hallways. When rooms aren’t occupied, the lights automatically turn off. “Renovation provides us the opportunities to value add to the space with environmental products available to us at the time,” said maintenance supervisor Heid.

“We’ve also gone through and delamped several areas in buildings that simply had too many lights in them. In other areas, we’ve shifted to T8 bulbs from T12 bulbs, reducing wattage

and energy consumption,” says Heid. “When possible, we have removed incandescent and spiral fluorescent bulbs and installed LED lighting.” Savings come not only from the more energy-efficient bulbs, but also from the reduced staffing required to change bulbs as frequently.

The Physical Plant Department also took the initiative to save on heating and cooling on older buildings through life-cycle maintenance, such as replacing windows and roofs to increase the insulation value of the building envelope.

ENVIRONMENTAL STEWARDS

In today’s era of tight budgets for public institutions, Harper College has harnessed the knowledge of its entire physical plant staff to minimize the school’s environmental impacts in an economically efficient way—setting a positive example for students and the entire community.

To further raise awareness of environmental stewardship, Harper offers a variety of courses, as well as a certification in Alternative Electrical Energy, says Scott Cashman, continuing education manager and Green Committee chair. “Sustainability topics are built in to many of our credit courses; we also offer non-credit enrichment classes on home composting, landscaping with native plants, as well as sustainability and social justice. One of our most popular courses is on the Science of Climate Change.”

With many students studying part-time while working, and all of them commuting, it is sometimes challenging to engage and involve them in the college’s green mission. That said, the student Environmental Club seeks to raise awareness of green issues, and all students have the opportunity to take advantage of bottled water refilling stations on campus, discounts on public transportation, and a ride sharing program.

Students arrive at college already familiar with the importance of recycling, and the physical plant team hopes that by the time they graduate, they will come to understand the many ways that they may be able to make an environmental contribution in their future careers.

“Harper College recently celebrated its 45th year, and as environmental stewards for this institution, we will continue to build on our sustainability activities and lead by example. As our students enter the world of work, we hope they will bring with them the ethos that a better environment can go hand in hand with good business decisions,” says Nancy Savard. ☎

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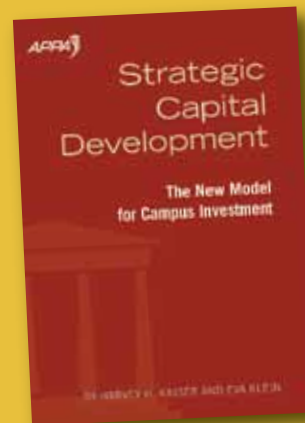
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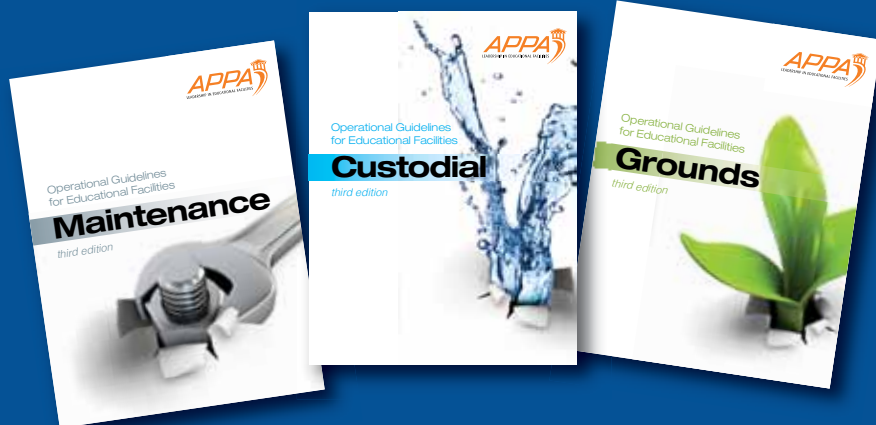


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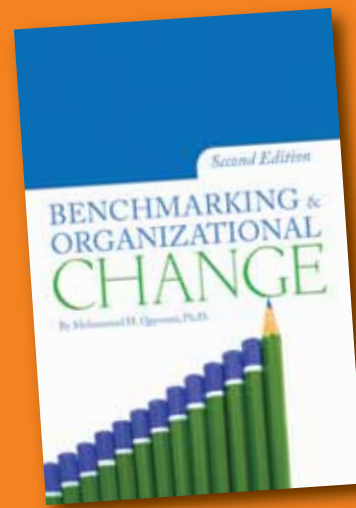


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