



"We envision Iowa State University as a national leader in developing and embodying sustainable practices that integrate excellence in education with institutional accountability for our natural, economic, and human resources."

-President Gregory L. Geoffroy

LIVE GREEN! in Review
2008-2011


A Note from the Director...

It is with much exCYtement and pride that I present you with this compilation of the 2008-2011 highlights of Iowa State University's Live Green! initiative. This chronicle of our journey toward a sustainable future is not presented in the form of a technical manual or research paper, but rather as a collection of pictures and hotlinked news highlights that exhibit the commitment, passion, and vision of our students, faculty, and staff in leaving a greener footprint for the generations that follow us.

Since starting as Iowa State University's Sustainability Director in 2009, I have had the privilege of working with an incredible campus team that has incorporated sustainability practices, resources, initiatives, and projects into every facet of living, working, and learning at ISU. It is impressive and humbling to take time to reflect back upon our collective journey and the impact we've made in just a few years. This is a celebration of our sustainable journey – accomplished and yet to come. I encourage you to take a minute to reflect and congratulate yourself on a job well done. We still have plenty to do, but we have blazed a noteworthy trail.

Thank you so very much for your ongoing support, dedication, and spirit! I look forward to our continued journey together!

**In greenness,
Merry Rankin, Director of Sustainability**



Sustainability: *"...meeting the needs of the present without compromising the ability of future generations to meet their own needs."*

-United Nations
Bruntland Commission



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Don't Forget to Click!
Follow the hotlinks throughout
the entire document to read the
full story!

*This document does not begin to fully represent every achievement and each person, organization, or initiative that has brought about our Live Green! success. For a more thorough representation of our complete campus wide efforts, refer to our annual [Board of Regents Sustainability Report](#), which has been presented annually since 2009, and the "[In The News](#)" link on the Live Green! website.

What is Live Green?

Live Green! is Iowa State University's campus-wide sustainability initiative encouraging all faculty, staff, and students to be fully committed to and engaged in making our campus, its operations, and initiatives as "green" as possible.

Live Green! is an initiative personally declared by President Geoffroy and kicked off in 2008. In declaring this initiative for Iowa State University, the President provided two challenges to all faculty, staff, and students:

1. To be a leader in sustainability among land grant institutions.
2. To recognize the involvement and dedication of every member of the Iowa State University community is critical to achieving this goal.

To ensure that students, faculty, and staff have access to tools and resources necessary to achieve his leadership goal, the President began the Live Green! initiative by putting into place four foundation pillars.

The Four Foundation Pillars

President's Advisory Committee on Energy Conservation and Global Climate Change

In 2008, President Gregory Geoffroy created an Advisory Committee on Energy Conservation and Global Climate Change as part of ISU's vision to be a model of energy efficiency and sustainability - a university that leads the way in conserving and minimizing its impact on global climate change.

The 16-member advisory committee advises the president on policies and activities that will reduce energy use and raise environmental awareness at Iowa State.

Live Green Revolving Loan Fund

To assist students, faculty, and staff in planning, implementing, and encouraging active engagement in energy conservation and sustainability projects and initiatives, the President established the Live Green! Revolving Loan Fund in 2008.

The Live Green Revolving Loan Fund is an interest-free loan opportunity for campus projects that promote energy conservation and sustainability, and provide a return on the investment.

Director of Sustainability

To spearhead Iowa State's commitment to sustainability, a Director of Sustainability was hired in 2008. The Director serves as the central leadership, support and coordination of sustainable initiatives on campus.

This position helps bring many initiatives that are all working towards similar sustainability goals together under the Live Green! Initiative, as well as expand ISU's sustainable footprint.

Annual Symposium on Sustainability

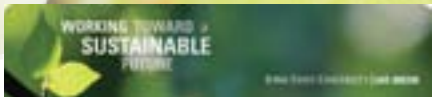
To offer all students, faculty, and staff an opportunity to celebrate sustainability achievement, the Annual Symposium on Sustainability takes place each year during the spring semester.

The event allows attendees to learn more about sustainable activities and initiatives at ISU, gain perspective and ideas from national and international sustainability experts, and to share ideas, opportunities, and challenges.

Vision

Two documents have been developed that build upon these foundation pillars in establishing building blocks for ongoing discussions and planning related to Iowa State University's sustainability objectives and policy:

1. "A Journey of Sustainability at Iowa State University" serves as a foundation resource that combines our sustainability charge, vision, commitment, and areas of focus. This document was developed as an intersecting resource for colleges, departments, units, and organizations in buildings, and expanding their individual and collaborative sustainability goals and action items.
2. "Envisioning Excellence in Sustainability at Iowa State University" serves as a visioning resource for colleges, departments, units, and organizations as they build and expand their sustainability goals and action items.



A Journey of Sustainability for Iowa State University

Our Charge

"I'm asking all students, faculty, staff, alumni, and friends to join in our Live Green! effort individually and collectively and assist in our journey toward being a leader in sustainability."

-Gregory L. Geoffroy, President, 2008

Our Vision

In recognition of our influence on educating and shaping life-long behaviors, decisions, and actions of its future leaders, and its civic responsibility at a public institution, we envision Iowa State University as a national leader in developing and embodying sustainable practices that integrate excellence in education with institutional accountability for our natural, economic, and human resources.

Our Commitment

Iowa State University is committed to protecting and enhancing all aspects of our university community. Through teaching, research, outreach, service, administration, and facilities planning and management operations, we will engage in short-term actions and long-term goals in planning and decision making to sustain ecological systems, educate campus citizens, promote local action, support sustainable business practices, and encourage global thinking.

The university will create, share, and apply knowledge that incorporates sustainability concepts throughout the curriculum and research, promotes sustainability literacy among students, faculty, and staff, and ensures that campus facilities, policies, planning, and management are efficient and environmentally appropriate.

The university is mindful and respectful of the delicate and vital balance that must be pursued and maintained between economics and stewardship during this journey.

How We Define Sustainability

Sustainability presumes that the planet's resources should be used conservatively, wisely, and equitably. Sustainability requires integration of economic, social and environmental components into planning and decision making to simultaneously advance economic vitality, ecological integrity, and social welfare.

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Brundtland Commission, 1987).

Our Areas of Focus

Operations

The University strategizes to go beyond compliance with environmental laws and regulations by integrating values of sustainability, stewardship, and resource conservation into activities and services. Iowa State University develops and promotes practices that maximize beneficial effects and minimize harmful impacts of operations, research and activities on the global and nearby environment. The University maximizes the efficiencies of its operations and services while minimizing its wastes and footprint.

Campus Planning

The University incorporates value assessment of the impact of its construction and development projects and the use of sustainable building, design, and management methods as they affect the needs of future generations of the University community and its greater Ames setting.

Academics

The University strives for excellence in sustainability education and research by integrating sustainability concepts into curricula; supporting interdisciplinary scholarship, research and faculty hires; and increasing faculty and student awareness of sustainability issues. The University aims to produce scholars who are literate in sustainability, research that illuminates and advances sustainability, and graduates who will carry the mission of sustainability into the state, the nation, and the world.

Research

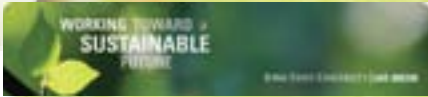
The University endeavors to catalyze productive relationships and wide-ranging participation among faculty, staff, students, and professionals to create new ideas and solutions to current and future sustainability challenges; to foster linkages among and within campus departments, both operational and academic; to promote awareness of sustainability goals, and to foster sustainability literacy among the entire campus community. Iowa State nurtures partnerships between ISU students, faculty, staff, and Iowa communities to provide research-based learning opportunities that create a sustainable quality of life in Iowa.

Administration

The University identifies dynamic sustainability goals that inform administrative policies and procedures in the areas of planning, decision-making, assessment, reporting, and alignment. These policies and procedures rely on scientific and technical analysis and support efforts to develop objectives and targets for operations, indicators, and measures to assure accountability, and reports on progress, with the overall goal of integrating knowledge of sustainability with actions to promote it.

Students

The University supports and cultivates a proactive and engaged student body involved in opportunities and experiences in sustainable living, education, and professional development and experience through events, initiatives, curriculum, research, strategic planning, and decision making. Empowerment gained through engagement in sustainability transfers to stewardship actions and goals far beyond the campus community.



Envisioning Excellence in Sustainability at Iowa State University*

Achieving excellence is a journey of a community that starts with a vision of targeted achievement areas, embraces practices and behaviors that support these areas, and secures commitment through short-term actions and long-term goals.

A vision of a sustainable Iowa State community entails that:

- Our planning and policies model leadership, creativity, open-mindedness, vision, collaboration, courage, and thoughtfulness toward a long-term commitment to sustainability.
- We remove institutional barriers that do not support and encourage sustainability.
- We give high priority to sustainability in all projects and initiatives.
- We position fundraising strategies to cultivate sustainability-minded giving.
- We adopt behaviors that lead all members of the Iowa State community to become more knowledgeable, advocate for change, reduce consumption, encourage participation, share knowledge, and motivate others in support of sustainability.
- We nurture a culture of active participation for students, faculty, and staff.
- We actively engage all ISU community members in sustainability goal-setting, implementation, evaluation, and continuous improvement.
- We engage the community of scientists at ISU and beyond to help us evaluate and identify the best sustainable practices.

A sustainable Iowa State community embraces practices and behaviors that support targeted achievement areas:

- We continuously reassess and reevaluate our energy consumption needs and the technologies that support them.
- We adopt practices that lead to efficient use of information technology resources to achieve university goals.
- We provide an infrastructure for alternative transportation.
- Our construction and maintenance planning and operations incorporate holistic sustainability practices.
- We approach all consumption, purchasing, and disposal activities and decisions within a reduce, reuse, recycle decision-making framework.
- We look for ways to include the greater Ames community in education, communication, coordination, and engagement activities that support and enhance ISU's sustainability efforts and initiatives.
- We strive to increase the sustainability of all our resource-intensive enterprises, including research, wherever practicable.

A sustainable Iowa State community commits to immediate, short-term actions that support long-term goals:

- We create a system of measurable sustainability benchmarking and progress reporting.
- We reduce energy use by consolidating work area energy consumption.
- We implement operations that support sustainability through reduced consumption.
- We promote and incentivize alternative transportation programs and practices.
- We adopt purchasing efforts that support sustainability.
- We create a sustainable food supply and consumption system.
- We adopt a communication plan focused on sustainability that serves the greater Iowa State community.
- We offer creative incentives that promote, recognize, and reward sustainability projects, efforts, and leadership.
- We provide a sustainable campus that immerses students in sustainability living, initiatives, curriculum, and policy making.
- We evaluate the sustainability of our practices using the best science-based data available.

*The vision outlined in this document is founded in a compilation of the visions, dreams, and call to action of the 319 attendees and off-campus participants of the 2009 Symposium on Enhancing Sustainability at Iowa State University and refined by the vision of the Campus Sustainability Working Group. In compiling these recommendations, consideration is given to action items that would ensure short-term success, long-term vision, and a foundation of commitment necessary to achieve excellence in leadership.

Infrastructure

The Live Green! initiative is supported by an impressive and substantial infrastructure of campus committees and teams.

President's Advisory Committee on Energy Conservation and Global Climate Change:

Advises the president on policies and activities that will reduce energy use and raise environmental awareness at Iowa State University.

Campus Sustainability Working Group:

Builds upon the guidance of the advisory committee toward engagement of the campus community.

Live Green Revolving Loan Fund Advisory Committee:

Reviews loan fund applications, monitors use of loan funds, and publicizes project results.

Sustainability Reporting Group:

Monitors, assesses, and responds to informational requests from external reporting organizations.

Campus Green Teams:

Enhances sustainability efforts, education, and engagement within a specified building, college, department, or operational area. There are currently 33 Campus Green Teams.

Council on Sustainability:

Fosters sustainability awareness, education, and involvement opportunities campus-wide.

Student Engagement Working Group:

Researches, develops, and facilitates the implementation of student sustainability engagement opportunities.

Awards and Recognition

The collective sustainability efforts and accomplishments of students, faculty, and staff at Iowa State University have been recognized and awarded through various organizations and initiatives.

Taking part in a number of annual reporting requests and submissions, Iowa State has received various recognitions for our on-going commitment toward increasing and diversifying our sustainability efforts and achievements.

In addition, through the establishment and awarding of the Live Green Awards for Excellence in Sustainability, Iowa State has also provided an internal mechanism to celebrate the individual and team achievements of our campus community.

Highlights



Platinum Honors

The College of Design's King Pavilion became the first platinum certified education building in Iowa.



Golden Honors

Hach Hall and Biorenewables Research Laboratory received LEED gold certification.

ISU Gets Green Grades



The College Sustainability Report Card is a self-reporting based system sponsored by the Sustainable Endowments Institute that compiles sustainability information from hundreds of colleges and universities in all 50 U.S. States and Canada and grades their "green" progress. This evaluation combines information from 43 indicators (including everything from sustainability staff and student organizations to renewable energy purchases and local food use) in nine major sustainability categories, to determine an overall grade.

Hundreds of colleges, including five in Iowa: Iowa State, University of Iowa, Drake University, Grinnell College, and Luther College, have received report card grades.

Iowa State's Grades

| | |
|------|----|
| 2008 | C |
| 2009 | C |
| 2010 | B- |
| 2011 | B |

Awards and Recognition

Highlights



Sustainability Honored at Governor's Environmental Excellence Awards

The Regent Universities Sustainability Programs awarded top environmental honors by Governor Branstad.



Silver Honors

Morrill Hall became Iowa State University's first LEED (green) certified building.



Award Winning Gardens

Reiman Gardens awarded a Green Sustainable Tourism Award.



Inspiring and Sustaining Iowa Communities

Design West Studio, a satellite program of the Design College awarded for excellence in partnership development.



Recognition for Green Loans

Iowa State University's Live Green Revolving Loan Fund was featured among national programs.



Gold Level Operations

Facilities Planning and Management awarded for business practices and policies gold level recognition.

Awards and Recognition

Highlights



Live Green! Awards for Excellence in Sustainability

As part of the Annual Symposium on Sustainability event, students, faculty, and staff were recognized for their commitment to excellence in sustainability. Awards were presented at the 2010 and 2011 Symposium events.

Making the Green List

Iowa State University named as one of 311 Green Colleges by The Princeton Review.



ISU Composting and Recycling Efforts Honored by Governor Culver

ISU Dining, Facilities Planning and Management, Department of Residence, and the student GreenHouse Group received awards for Environmental Excellence.



Solar Decathlon Team Brings Home International Honors

An interdisciplinary team of faculty, staff, and students was the first State of Iowa team to complete in the US Department of Energy's Solar Decathlon Challenge. The team placed 12 out of 20 teams, with top 10 recognitions in 4 out of 10 individual competitions.



ISU Gets High Marks on Sustainability

Iowa State recognized with exemplary levels of sustainability activity in the National Wildlife Federation's national report card.

Education and Research

Every college, and over half of the departments on campus, have sustainability courses. Currently, Iowa State offers a total of 888 sustainability-related and focused courses!

Through partnerships involving faculty, staff, community, regional, national and international partners, and donors, Iowa State University has integrated sustainability into curriculum and practice in a diversity of opportunities.

Highlights

Curriculum

Iowa State University is committed to increasing and diversifying student education, awareness, and engagement opportunities in sustainability through curriculum. To date, all colleges at Iowa State University offer sustainability courses. A [Sustainability Course Directory](#) listing all sustainability courses has been developed, and is a resource available to students.

Curriculum not only engages students in the classroom, but also beyond the classroom through a variety of field experiences and service learning opportunities. Through these “on-the-ground and hands-on” opportunities, ISU students engage in sustainability topics including: Managing Sustainable Enterprises, Sustainable Engineering, Sustainable Design, Sustainable Urban Development, and Bioeconomy. It is through these courses that students have helped empower and assist communities in Germany, Uganda, and Haiti, as well as countless communities throughout Iowa and the United States.



Green Homes: Out of the Classroom, Into the Community

Iowa State Bridge Studio students had the opportunity to learn and build green.



Sustainability auf Deutsch

ISU architecture students took part in the Berlin Summer Academy focusing on climate change and sustainable urban development.



Teaching, Learning, Building Ugandan Sustainability

Through a service learning opportunity, ISU students and faculty members helped create sustainable connections.

Sustainable Degrees

Currently, at Iowa State, undergraduate, masters, and doctorate degrees in sustainable agriculture are offered to students as well as an interdisciplinary sustainability minor.



ISU's Own Navy Keeping Waterways Healthy

Biology students took personal responsibility in Skunk River water quality.

Curriculum

Highlights



Shipping Containers Restore Home to Haiti

ISU architecture students brought homes to a Haitian village.



Toward Sustainable Cities

College of Design students exhibited their work from a summer sustainable community design project in Berlin.



College of Agriculture Offers EARTH Opportunity

The Education And Resiliency Through Horticulture (EARTH) program offered a unique students learning opportunity in the Virgin Islands.



Walking the Sustainable Talk

Landscape architecture students took their classroom on the road.



Sustainable Furniture Course Offered

Students designed and built sustainable consumer goods.



A Worldview of Agriculture

Agriculture and Biosystems Engineering students applied their knowledge in Brazil.

Research

In addition to a dedicated focus of incorporating sustainability into curriculum, Iowa State University has offered a multitude of opportunities to “work toward a sustainable future” through research.

ISU has research units in seven of eight colleges, and in total, 100 research centers and institutes provide opportunities for research engagement for students, faculty, and staff. Ames Laboratory, a federal Department of Energy facility, is also housed at Iowa

State. In addition, the Iowa State University Research Park serves businesses of any size, including start-ups, small-staff operations, growing entrepreneurial ventures and corporations with multiple locations worldwide.

Sustainability research initiatives have included the development of sustainable fuels, foods, and products, as well as practices to reduce emissions and pollution.

Highlights



Greening Asphalt

Research team laid bio-asphalt



“Char-ing” Climate Change

Researchers considered opportunities for biochar.



New Biolife for Corn Stover

Biorenewables Research Farm initiated stover bioproducts project.



Biolabeling Hits Store Shelves

Center for Industrial Research and Service partners with USDA developed the Bio-preferred Program.



Greening Cereal

Professor honored for his research with sustainable cereal grains.



Creating a Sustainable Fuels System for the Midwest

\$25 million USDA grant initiated the cenusa bioenergy project.



New Center Studies Emissions

Biobased Industry Center focused on carbon emissions and other industry challenges.

Research

Highlights



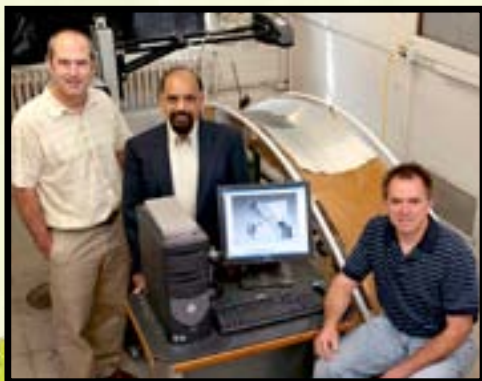
Researchers Develop National Energy, Transportation Model

Professor lead in the development of new infrastructure designs for the nation's energy and transportation systems.



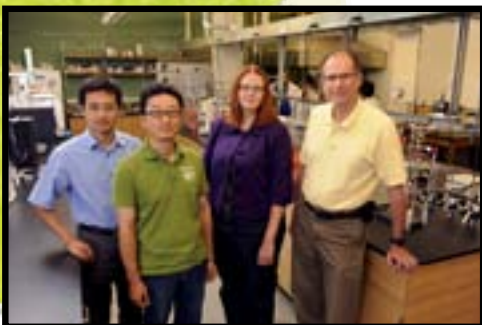
New Bioeconomy Project

The Leopold Center for Sustainable Agriculture and the Iowa Learning Farm coordinated a three-year project focused on cellulosic biomass management.



Harnessing Wind Efficiency

Wind Energy Manufacturing Laboratory addressed efficiency.



Greening Fuels and Products

Hybrid Processing Laboratory combined biochemical and thermochemical technologies.



Sustaining Lake Laverne

Researchers improved campus water quality.



Greener Cleanup for the Gulf

Professors awarded funding to aid oil cleanup.

Operations

An important component of the Live Green! initiative has been to ensure that the day-to-day operations at Iowa State University are planned and completed with a focus on excellence in sustainability. Although ISU's best management practices have included sustainability-minded activities and practices for a number of years, it was not until President Geoffroy's Live Green! initiative and challenge to all students, faculty, and staff to become actively engaged in charting our sustainable future that a concerted campus-wide effort was given to every facet of campus operations.

From the way we build, renovate, clean, and provide utilities for our buildings to how we manage waste, maintain our grounds, utilize transportation, and purchase supplies, our operational teams are dedicated to sustainability and living green.

To date, 12 campus energy efficiency and sustainability projects, providing a minimum annual return on investment of over \$250,000 have been funded through Iowa State University's Live Green Revolving Loan Fund.

Highlights

| Current Live Green Revolving Loan Fund Projects | Approved Loan Funds |
|---|---------------------|
| Bergstrom Indoor Practice Facility Space Reconfiguration | \$6,086 |
| College of Design Phase 1 Lighting | \$100,000 |
| College of Design Phase 2 Lighting | \$100,000 |
| ISU Dining Composting | \$35,000 |
| College of Engineering Energy Efficiency | \$165,000 |
| Facilities Planning and Management Campus Lighting Efficiency | \$500,000 |
| College of Human Sciences Computer Power Management | \$3,014 |
| College of Human Sciences Heating Efficiency | \$2,250 |
| Monona County Extension Office Remodel | \$5,230 |
| Physics Hall Lighting Renovation | \$36,607 |
| ISU Power Plant Lighting Renovation | \$37,035 |
| Reiman Gardens Occupancy Sensors | \$3,500 |



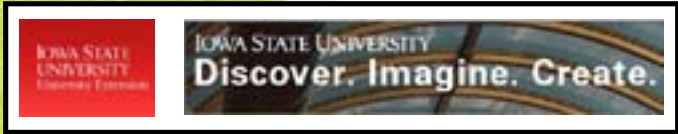
Green Loans Open Doors for Savings

ISU Athletics increased the energy efficiency of their Bergstrom through the separation of facility space.



Spreading the Green Light

The College of Human Sciences incorporated power management software to increase the energy efficiency of their computers.



First Green Loans Awarded for Efficiency in Renovation and Lighting
 Monona County Extension and the College of Design led efforts in utilizing "green" loans.

Buildings

Iowa State University's design and construction staff and partners are committed to providing students, faculty, staff, and visitors sustainable facilities to learn, teach, work, and engage.

Leadership in Energy and Environmental Design (LEED) is an internationally recognized green building certification system offering third-party verification that offers the opportunity for projects to not only be certified, but to achieve levels of silver, gold, and platinum certification. As part of this Live Green! initiative, President Geoffroy set a goal that all new construction and major renovation projects at Iowa State University should be designed and constructed to achieve LEED Gold Certification.

Currently, ISU has four LEED certified buildings (one silver, two gold, and one platinum). Seven additional LEED projects are in progress, and the University is partnering with the City of Ames to incorporate sustainable principles into a community Intermodal Facility, which will serve as a central hub for multiple modes of transportation offered to the Ames community.

In addition to the President's goal of LEED Gold, Design and Construction Services have further increased ISU's commitment to sustainable building through the appointment of a Coordinator of Sustainable Design and Construction, as well as delineating specific "credit points" within the LEED system that are required above and beyond the designated prerequisites. One required credit point aims to reduce the "heat-island effect" of buildings through the inclusion of a "highly reflective" or "green" roof, which considerably reduces energy consumption.

Highlights

Projects Completed

LEED Level

| | |
|---|----------|
| Morrill Hall (2008) | Silver |
| College of Design- King Pavilion (2010) | Platinum |
| Hach Hall (2011) | Gold |
| Biorenewables Laboratory (2011) | Gold |



King Pavilion



Morrill Hall



Biorenewables Research Laboratory



Hach Hall

Projects in Progress

LEED Level

| | |
|--|--------|
| Recreation Facilities (2012) | Gold |
| College of Veterinary Medicine Phase 2-Small Animal Hospital Renovation and Addition (2012) | Gold |
| Biorenewables Complex-Agriculture & Biosystems Engineering (2014) | Gold |
| Troxel Hall (2013) | Gold |
| Football Training Facility (2012) | Silver |
| Curtiss Hall-Phase I-Student Services Mall (LEED CI-Interior Design and Construction) (2012) | Gold |
| Curtiss Hall-Phase I-Harl Commons (LEED- CI) (2013) | Gold |

Climate and Energy

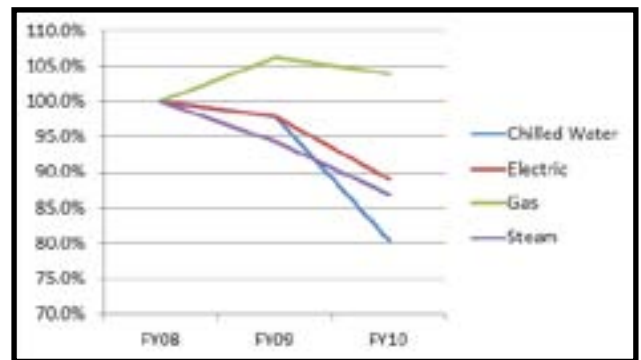
Being a university that leads the way in conserving energy and minimizing its impact on global climate change is of concerted focus to Iowa State University. So much so, that convening the President's Advisory Committee on Energy Conservation and Global Climate Change was one of the first action steps put into place by President Geoffroy, following the announcement of the Live Green! initiative.

Through the guidance and work of this 16-member committee, the University installed building metering to campus buildings to monitor the utilities consumption of electricity, gas, steam, and chilled water, and established a Live Green Revolving Loan Fund that offers forgivable loans to any campus project or initiative that will increase the efficiency of energy consumption, reduce greenhouse gases, and further campus sustainability efforts.

Though the University currently utilizes non-renewable fuel sources to meet campus energy demand, reduction of non-renewables is an ongoing goal. In 2009, ISU and the City of Ames entered into a joint contract with a local wind farm to purchase the equivalent wind power of 10% of ISU's electrical consumption.

The three Regent institutions are also collaborating on a joint Environmental Strategies Study. When complete, this study will identify alternatives to satisfy present and future campus energy demands, while considering future environmental regulations, campus sustainability goals, and life cycle costs. These alternatives include scenarios that reduce or eliminate coal consumption.

In addition, to increase the use of renewable energy sources, a number of demand reduction initiatives have been put into action. These initiatives, ranging from the installation of energy savings devices including occupancy sensors, timers, and vending machine misers, to building competitions focused on behavioral change, and winter break building shutdown have also been completed. As a result, collective energy consumption has been reduced by nearly 15% since FY08, which includes a 2% electrical reduction occurring from FY09 – FY11 in spite of record student enrollments and the addition of new campus buildings.

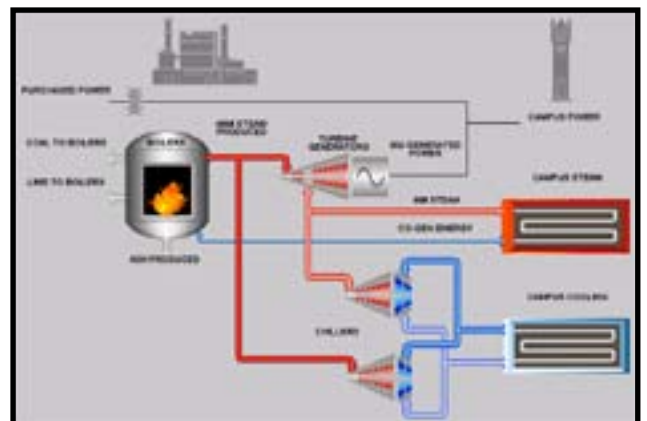


Highlights



Spreading the Green Light

Morrill Road became greener, brighter, and more cost-effective with LED streetlights.



Watt Watch, in Real Time

Facilities Planning and Management offered an on-line utility use "watch" system.

Climate and Energy

Highlights



The Windy Campus

Wind energy arrived on campus, reducing coal use by as much as 9,000 tons per year.



Holiday Break for Campus Energy Consumption

Efforts focused on reducing energy during the holidays.



Compacting our Trashprint

Solar energy increased trash collection efficiency.



ISU IT Commits to Low Carbon

Iowa State University committed to the Energy Star Low Carbon IT Campaign.



Low Energy Drinks

Energy usage reduced \$14,000 through vending misers.



ISU Becomes Green Partner

Iowa State University joined the Environmental Protection Agency's Green Power Partnership.



Coal-Fired Efficiency

ISU ensured power plant efficiency through "co-generation" of heating, cooling, and electricity.



Lightening the Football Footprint

ISU Athletics lowered their carbon footprint through wind credits.



\$3 Million in Green Savings

In all corners of campus, faculty, staff, and students worked diligently and creatively to reduce energy consumption.

Transportation

Ensuring efficiency in current campus transportation and parking systems, coupled with ongoing movement toward long term sustainable transit options for our campus community, as well as other communities with whom we partner, is of important significance toward a sustainable future. Optimizing transportation efficiency not only reduces costs and consumption through resource savings, it also reduces emissions and addresses concerns related to global climate change.

Iowa State University's transportation fleet currently consists of over 200 low or no-emission vehicles, including four electric vehicles. The campus and community bus system, CyRide, has also replaced 17% of its fleet, 12 buses in total, with Hybrid buses, resulting in an annual savings of 23,000 gallons of fuel and a reduction of 210,513 kilograms of CO2 emissions.

Additional policies and initiatives focusing on transportation efficiency at Iowa State University include an online Ride Share program, a Car Share program (WeCar), the installation of 42 solar trash compactors across campus (that in addition to reducing trash pick-ups by a ratio of 5:1, through a "clean notification system" eliminate all fuel usage and emissions except when the compactors are full and ready for pick-up), virtual meeting and conference attendance through webinars and conference calling, and a vehicle idling policy.

Highlights



The Cybrids Are HERE!

CyRide unveiled 12 new hybrid buses.



Cyclers Try Battery-Assisted Bikes

One hundred ISU faculty and staff tested electric-assisted bikes.



Electric Cars Lead to Environmental and Monetary Benefits

Facilities Planning and Management and Environmental Health and Safety departments purchased electric vehicles.



Introducing WeCar

ISU offered a car sharing program to students, faculty, and staff.



Green Rides

GSB announced its online Rideshare service.



Riding the BioBus

Students of ISU BioBus tested their biofuel (made from ISU Dining oil) in Cyride buses.

Purchasing

Purchasing policies are in place at Iowa State University that prioritize the consideration of energy efficiency, recycled content and non-disposable materials, local products, green cleaning items, and paperless procurement in procurement decisions. Purchasing highlights that support sustainability goals and initiatives include:

- 98% of all fine paper purchases made from recycled content;
- 12% of total dining purchases, nearly \$1 million from local products in 2010-2011 and included produce, meat, honey, eggs, dairy, popcorn, and condiments. In addition, local products were provided by the ISU Student Organic Farm;
- 90% of all university cleaning supplies are green certified;
- incorporation of Energy Star equivalent (or better) on applicable energy consuming products' purchasing specifications and bid evaluation criteria; and
- significant reduction checks written, invoices and purchase orders processed, and postage expenditures, in spite of a 59% increase in purchasing activity, through commitment to electronic procurement.

Highlights



Graduating in Green

University Bookstore offered a "green" option for graduates.



Clean and Green

Custodial staff replaced harsh chemicals and solvents with safer, greener products.



Certiifiably Green

Forest Stewardship Council (FSC) or Sustainable Forestry Initiative (SFI) made up 84% of ISU Printing and Copy Services' paper consumption.



Farm to ISU Program Grows Into Second Year

Local foods increased in ISU dining centers.

Waste Reduction and Diversion

Being mindful and proactive with respect to the way we consume, conserve, and consider our water resources is a vital component of a sustainable campus and of primary consideration and focus at Iowa State University. Policies related to storm water management and irrigation practices are currently in place and are reviewed and revised on an ongoing basis.

In addition, a number of campus initiatives and projects further support our commitment to ensuring healthy and available water resources. These projects and initiatives are spearheaded primarily by the following campus teams:

Design and Construction Services - New buildings on the ISU campus are designed to use significantly less water than a standard code designed building of the same use. Incorporation of low flow urinals, dual flush valve toilets, motion sensors on hand washing sinks, use of storm water for flushing to reduce water use daily, and the incorporation of green roofs are water quality and conservation features incorporated into campus buildings.

Custodial Services - For a number of years, ISU's custodial team has been conserving water and resources through the purchase of concentrated cleaning supplies, to which water can be added, rather than purchasing pre-mixed products that not only use additional water, but also use additional resources associated with packaging and transportation. Most recently, floor finishing equipment was replaced with a more effective and efficient model that also uses 50-70% less water.

Landscaping and Grounds Management - Iowa State has adopted a limited irrigation policy for all campus landscaping and grounds with non-irrigation being the common practice for campus lawns, residential areas, and recreational areas. In ensuring a balance between water conservation and aesthetics, the campus services team relies on the use of mulch (to reduce moisture loss) and native plantings (adapted for resistance to the intensity of local weather, as well as native pests). In addition to plantings, over 45 best management practices for campus stormwater management on campus have been implemented including: bio-swales, rain gardens, permeable paving (pavers, concrete, and asphalt), stream bank stabilization, and detention and retention areas.

Department of Residence - Not only is water conservation something you can experience at work and classes at ISU, if you live in campus housing – you can experience it at home too. Shower heads, toilets, and faucets are all chosen and maintained to use water efficiently. The residence team also provides education and awareness resources and opportunities to encourage residents to consider things they can do individually to increase conservation efforts. One example is a shower timer provided to residents to help them gain an understanding of water conservation through reducing daily shower time.

Highlights



Up on the Rooftop - Horticulture Is Going Green!

Green roof and green classroom offered.



Student Display Shows Green Roofs in Action

Student Society of Landscape Architecture brought green roofs to street level with a new display at the Design College.

Waste Reduction and Diversion

Consideration of waste production and opportunities for reduction and diversion is an important component of sustainability at Iowa State University. Through campus initiatives, including composting, recycling, reuse, and reduction, ISU has diversified and expanded opportunities to divert materials from being landfilled. Because of a unique partnership with the City of Ames and their refuse-derived fuel (RDF) system at the Resource Recovery Center (one that burns garbage with coal to produce electrical energy), a majority of the materials the University does dispose of as waste is secondarily diverted as a supplemental fuel source. Through these collective opportunities on-and off-campus, ISU's current landfill diversion rate is 75%.

Composting

Iowa State University has composted animal bedding and manure, landscaping waste, and other biomass research waste for a number of years. In 2009, ISU Dining began composting all food waste from campus residential dining facilities, as well as pre-consumer food waste from catering services. In 2010, food waste from the suites at Jack Trice Stadium also began being composted.

The University's Compost Facility has the capacity to process 15,000 tons of materials annually, with a 2010-11 production of 7,800 tons. All finished compost is utilized for campus projects exemplifying a unique full-circle engagement in sustainability.

Highlights

Sustainability in the Hoop

Thousands of tons of ISU waste material came back to campus as an invaluable resource.



Recycling

Campus-wide recycling for white paper, newspaper, cardboard is offered on an ongoing basis to all students, faculty, and staff in campus buildings. On an annual basis, ISU recycles an average of 400 tons of paper waste through campus efforts. Additional recycling for items specifically connected to campus operations is also available for departments and units. Items in these recycling programs include, but are not limited to, electronics, chemicals, rechargeable batteries, light bulbs, toner cartridges, confidential documents, and demolition and construction waste. Though not established programs, impressive results have also been achieved in recycling mattresses and used cooking oil.

In 2009, through a partnership with the Department of Residence and a student organization, The GreenHouse Group, multi-commodity recycling, including mixed paper, redeemable cans and bottles, plastics, and wet board, was provided for all campus residential housing. Through this program, 18.5 tons of materials were recycled in the first six months, and over 44 tons during the 2010-2011 academic year.

In addition, a number of targeted recycling efforts take place throughout the academic year to increase awareness and engagement in waste diversion for the on-campus community, as well as visitors to ISU. Events including VEISHEA, Green Your Scene, Recyclemania, the EPA Game Day Challenge, and the University's TreeCYcle program, which recycles downed campus trees into furniture, are a few examples.

Highlights



900 Mattresses that Need a Place to Go

Department of Residence identified a recycling opportunity for waste mattresses.



Scoring Green at Homecoming

ISU competed against 90 other colleges and universities in the EPA Game Day (waste reduction) Challenge.



TreeCYcling at ISU

Downed campus trees became furniture for campus buildings.



Students Living Green

Students took charge of keeping their campus home green.



ISU Joins Recyclemania

The GreenHouse Group brought new goals and challenges to ISU's waste stream.



Greening by the Truckload

Tons of mixed paper were recycled through targeted collection events.

Reuse

ISU offers a number of reuse opportunities to students, faculty, and staff for items they would otherwise consider waste. Through the University's ongoing surplus program, equipment, furniture, and supplies related to campus offices and operations that are deemed unneeded by one department and/or unit can be utilized by another department and/or unit rather than disposed of. This results the return of over \$250,000 of reusable assets into university operations on an annual basis. In addition, surplus items are also offered for sale to university employees and students, as well as any community member during weekly public sales.

Multiple events during the academic year offer unique

and impactful opportunities for reuse. SAVE (Simple Act, Vital Effect) is the Department of Residence's annual spring move-out collection event in which any reusable item (clothes, furniture, electronics, food, cleaning supplies, etc.) is collected for redistribution to community shelters, food banks, and non-profit organizations. In two years of offering this opportunity, nearly 500 bags of food and 3,000 pounds of clothing has been collected and put to reuse. Additional events, including a t-shirt collection, community clothing, book and FreeCycle swaps, textbook collection, and ISU Dining's donation of "day-old" items from five of their campus cafés, to community programs and organizations, add additional waste diversion, as well as benefit to communities in need.

Highlights



Off the Street and Into Bags

University banners were recycled into one-of-a-kind reusable bags.



Making a Difference, One Sandwich at a Time

ISU Dining partnered with community organizations to donate excess pre-packaged meals.



Not Landfill-Bound

Move-out collection efforts provided food, clothes, furnishings, and electronics to community organizations and families.



Trashing Instead of Trading

Students helped students keep items out of the landfill through DormDumpster.com.



Sustaining Communities, One Dress at a Time

Used pillow cases from the Memorial Union Hotel provided assistance to African communities.

Reduction

In addition to finding alternatives to landfilling waste, Iowa State University has made concerted efforts to reduce overall waste production, and not have to consider options for diversion.

ISU Dining has taken a multi-faceted approach to waste reduction through their operations and the services and opportunities they offer to their customers. In 2009 ISU Dining introduced trayless dining in their newly renovated Seasons residential dining facility. Within a few months of comparing food waste generated between a trayless facility and one still utilizing trays, there was nearly a 50% reduction. In 2010, all residential dining facilities made the switch to trayless. In addition to considering food waste, ISU Dining has also been very proactive in waste produced from disposables, specifically from coffee cups and take-away containers. Though a refill discount program had already been established for “to-go” beverages throughout campus dining facilities, ISU Dining increased marketing efforts as well as the refill discount in 2010 and coupled this with the distribution of 11,500 reusable mugs from 2008-2010. In addition, ISU Dining also introduced their “green to-go” reusable take-away container to replace disposable options as well as increasing their use of compostable disposable containers and cutlery.

Through partnerships with Information Technology Services (ITS), a number of departments and units have reduced waste through opting for electronic options for projects, initiatives, and day-to-day operations. Paperless options for functions, including purchasing, financial transactions and communications, room scheduling, organization and event registration, venue reservation, record keeping, evaluation and exam administration (reducing paper “bubble sheets” by 61,850 during one academic year), and resources including the University directory, course catalog, and ISU Dining menus have significantly reduced paper purchases, as well as costs and labor related to collection and recycling of diverted paper waste. In addition, ITS has also incorporated duplex printing defaults, as well as an updated print count on all ITS managed student printers that collectively reduced paper use by 33% in one semester.

Additional ITS initiatives focused on the virtualization of servers and hardware have resulted in additional reductions of electronic waste. To date, 400 servers and 200 desktop systems have replaced traditional units. Through this initiative, not only is electronic waste reduced, energy is also conserved.

Highlights



Bringing Your Own Cup Just Got Greener

ISU Dining announced an increase in their “Bring-your-own Cup” discount program.



Green Your “To-Go”

Reusable “to-go” containers offered for campus dining.



To Tray or Not to Tray... There Is No Question

All residential dining facilities went trayless.



Greening and Lightening Your Backpack

E-Textbooks arrived at ISU.

Campus and Community Engagement

Opportunities to engage the students, faculty, and staff, both on-campus and in the community, in activities, events, and initiatives that support and further sustainability has been an important focus of the Live Green! initiative. "Give back" opportunities add a vital facet toward a truly sustainable future through aiding in strengthen communities and empowering citizens.

Through efforts that have benefitted Iowa State University, the Ames community, communities in Iowa, and across the United States, and even citizens and causes around the world, our students, faculty, and staff are living green both in and out of the office and classroom. From fundraisers, to collections, to events, to raise awareness, and increase understanding, we have challenged ourselves to make a difference, learn from and share with one another, leave a greener, more sustainable footprint, and be mindful of the needs of future

Highlights



Dancing for a Sustainable World

Barjche 2011 chose nature and sustainability as their theme for their performance.



Students Take Part in 12-Hour Famine

The International Student Council brought community sustainability front and center through a day-long global poverty event.



Team PrISUm to Compete in American Solar Challenge

ISU's solar team and their car Anthelion competed in a one-week, 1,100 mile race from Oklahoma to Illinois, June 19-26, 2010. Team PrISUm became the only American team to enter a new solar car in this challenge for 10 consecutive years.



Sustainability for Town and Gown

ISU and the City of Ames partnered in community sustainability through a shared appointment of ISU's Director of Sustainability.



Annual College Creek Cleanup Makes a Splash

Volunteers from ISU and Ames, family and friends, helped make College Creek, ISU, and Ames clean and green!

Campus and Community Engagement

Highlights



One Thousand Light Bulbs and Counting

Students took the Live Green! Initiative off campus by engaging local businesses in energy conservation and sustainability projects.



Students Donate Meals to Feed the World

Partnering with Oxfam America, ISU students joined to end world hunger.



Building Sustainability from Devastation

Through visioning and partnership, a Haitian community started restoration with help from groups such as Design Across Boundaries.



ISU Students Help Shift the Planet

Students joined students from around the country in Washington DC to discuss clean and green energy.



Going Green at the Iowa State Fair

Cardinal and gold and green were ISU's colors at the Iowa State Fair.

Campus and Community Engagement

Highlights



Students “Break” to make a Difference

Iowa State Alternative Breaks offered students the opportunity to give back during spring break.



Showing Their Green Stuff

Campus celebrated National Campus Sustainability Days.



ISU Celebrates Earth Day

Campus celebrated Earth Day and Earth Weeks, which included the commemoration of the 40th event.



Stuffing a Sustainable Community

Annual “Stuff the Bus” food drives resulted in invaluable support for the Ames community.



Student Sustainability

Students sustained the ISU community during the United Way’s Day of Caring.



Fashion Show 2011 Walks the Green Carpet

The 2011 Fashion Show adopted a sustainability theme and look.

Campus and Community Engagement

Highlights



Greening Closets

A class project proposal became an annual event that clothed the community.



Building the Kawasaki Electric

The Environmental Technologies Club tackled the electric motorcycle.



Green Service

Over 1,000 volunteers braved the cold to Keep ISU and Ames Beautiful during annual Stash the Trash events as part of VEISHEA Service Day.



Building Sustainable Futures-One Book at a Time

ACACIA Fraternity built world literacy with end-of-year text-books.

Campus and Community Engagement

Highlights



ISU Becomes Affiliate of Keep Iowa Beautiful

Iowa State University became the first higher education institution in the state to earn affiliation with Keep Iowa Beautiful.



Students Partner in Building Community

Through a unique partnership between a Story County farmer, an organization helping farmers grow communities, and a student contractors chapter, Youth and Shelter Services was assured handicap accessibility.



Food Pantry Trick or Treating

ISU students collected canned goods instead of candy to offer assistance to the Ames Food Pantry.



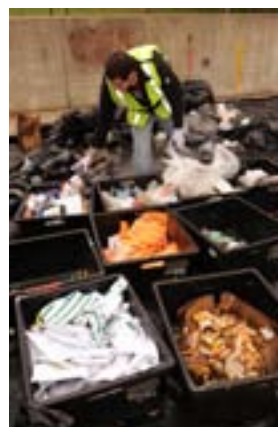
International Student Council Greens Campus

Students and the community collected 50 bags of trash as part of International Week activities.



Campus Gathers to Envision Sustainability

Annual Symposium on Sustainability events in 2009, 2010, and 2011 featured impressive and accomplished keynote speakers; presentations about campus initiatives and events; group discussions on goal setting and visioning; recognition of achievement; and a collective opportunity to increase awareness and understanding about sustainability and the Live Green! initiative.



"I'm asking all students, faculty, staff, alumni and friends to join in our Live Green effort -- individually and collectively -- through their colleges and departments, in their homes, and various organizations."

-President Gregory L. Geoffroy





LIVE GREEN!



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