

**Ball State University
Unit-level Sustainability Planning**

[as mandated in Goal IV_F of the 2007-2012 Ball State University Strategic Plan]

A Sustainability Plan
for the
Department of Landscape Architecture

Submitted to
Dr. Terry King
Provost and Vice-President for Academic Affairs

31 January, 2008

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Achievements to Date

The following are our short-form question responses within the categories of Governance and Administration, Operations, Curriculum and Research, and Community Service and Outreach. In developing these short-form responses, we are pleased to report significant achievements in these areas and have identified opportunities for further development/transformation.

[Provide brief descriptions for each affirmative or goal response]

Governance and Administration

Y N Goal

1. The unit has standing committees to address issues of sustainability.
Faculty asserts that this should be a College Committee

Y N Goal

2. The unit gives assigned load and/or a staff position dedicated to sustainability initiatives.

Provides course loading for LA 371, 471

Assigns loading for Director of Land Design Institute (LDI) LA 471

Y N Goal

3. The unit has established policies that encourage sustainability initiatives.

Approved 2010 Initiative

Curricular assessment/overlay for LEED standards incorporation

Y N Goal

4. The unit has sustainability integrated into its mission statement.

“Provide students a high-quality balanced professional educational experience that prepares them for a changing profession and society.

Upon graduation the student will be able to integrate and apply a basic knowledge of:

.Applied environmental and ecological systems

Y N Goal

5. The unit maintains active membership in organizations engaged in promoting sustainability.

While individuals maintain numerous memberships in ASLA and other organizations, the unit does not provide them.

Y N Goal

6. The unit encourages and rewards research related to sustainability.

No resources are available to reward sustainability beyond anything else that is rewardable. We haven't given it special status.

Y N Goal

7. The unit encourages and rewards the integration of sustainability issues into course material.

2010 Initiate

LEED assessment plan for Curricular Overlay

Curriculum Overlay for Healthy Living Initiative

Operations**Y N Goal**

1. The unit purchases/uses Energy Star Office and Telecommunications Equipment. Little equipment is purchased. Consideration being given to replacing 1950's era refrigerator with Energy Star model.

Y N Goal

2. The unit has policies to restrict paper use. Casual policies for class, research, and administrative copy work. Duplexers have been purchased for copier and networked printer.

Y N Goal

3. The unit uses recycled paper. Unit uses best (recycled) paper available through the University's purchasing agreements.

Y N Goal

4. The unit recycles all materials accepted by the university system. For office purposes, we try to do what we're told to do. Classroom and studio materials are not as well covered.

Y N Goal

5. The unit has appropriate recycling bins throughout its offices. Bins in main office and separate containers in faculty offices. Bins requested and provided in all design studios.

Y N Goal

6. The unit has policies that encourage the use of teleconferencing capabilities to limit travel. We have teleconferencing equipment of conference room. Faculty use "Bridget" and other software for video conferencing. Courses have used teleconferencing for online studio reviews with distant practitioners.

Y N Goal

7. The unit specifies hybrid electric vehicles for travel. By recent consensus decision, department will now request hybrid car when faculty request vehicles for travel.

Y N Goal

8. The unit shows preference for sustainable lodging for professional travel. Not aware of opportunities.

Y N Goal

9. The unit uses washable dinner/service ware for its meetings/receptions. Will soon purchase stainless steel silverware for day to day use. Unit has agreed to not purchase bottled water for events, except for special visitors.

Y N Goal

10. The unit purchases/uses remanufactured office furniture. No office furnishings have been purchased in the last 5 years.

Y N Goal

11. The unit purchases/uses sustainable materials for office furnishings. No office furnishings have been purchased in the last 5 years.

Y N Goal

12. The unit discourages the use of single-occupant automobile travel. Carpooling encouraged for business purposes. No involvement in personal vehicle use.

Y N Goal

13. Classroom, Office and/or Restroom lighting for the unit is controlled by occupancy sensors.

Some units installed and subsequently removed as ineffective. Some remain in selected faculty office. Not an initiative controlled by the unit.

Y N Goal

14. The unit's thermostats are set to minimize energy use for heating and cooling. Some office/classroom thermostats operational. Most are not. Not an initiative controlled by the unit.

Curriculum**Y N Goal**

1. The unit has courses dedicated to issues related to sustainability. LA 371: Sustainable Site Design; LA 471: Sustainable Land Systems

Y N Goal

2. The unit has courses with sustainability content. LA 270/573: Environmental Systems. LA 301: Housing and Community Design. LA 311, 312, 413: Landscape Architecture Engineering. Et. Al. Department has encouraged inclusion of sustainability component in all professional coursework.

Y N Goal

3. The unit has courses in which students are encouraged to address sustainability issues in their assignments. Department has encouraged inclusion of sustainability component in all professional coursework.

Y N Goal

4. The unit recognizes sustainability courses from other departments as legitimate electives for credit in its programs. Founding Department/BSU partner in Clustered Environmental Minors in Environmentally Sustainable Practices. Undergraduate curriculum has provision for enrolling in a minor or directed electives (18 cr.hrs.).

Y N Goal

5. The unit has dedicated sustainability courses that can be taken for credit as part of a major or minor outside of the unit. LA 471 is the Capstone course for Sustainable Land Systems; LA 270 also used for Sustainable Land System Minor.

Research

Y N Goal

1. Members of the unit have conducted research on issues of sustainability in their discipline.

- “Cross National Ecological Design Practice Study”, Funded by Wadsworth Foundation Grant
- CERES Fellowships:
 - Rob Benson
 - Martha Hunt
 - Joe Blalock
 - John Motloch (3)
- Business Fellows Project: Gardens for Health and Healing, Awarded May, 2004, scheduled for AY 04-05.
- Business Fellows Project: BioTown
- Business Fellows Project: Indiana Clean
- Selected Research Projects include:
 - Report: Resource-balancing Design for the FSEEC-LandLab
 - Co-PI: NSF Biological Field Station Grant (FSEEC-LandLab Master Planning)
 - Last year’s externally-funded research in area of sustainability included
 - African-American University in Cameroon funding to conduct “*Field Reconnaissance for the African-American University for Cameroon*”. Grant funded Scott Truex and me to travel to Cameroon, Africa for ten (10) days for area and site reconnaissance, and to build support for a sustainable campus to be located in the Tali Village.
 - “*Enhanced Sustainability through Straw-Bale Construction: Education-Research Building Demonstrating How to Live Sustainably in the Midwest*” (Gray and Motloch). This \$10,000 EPA-P3 National Student Design Competition for Sustainability grant (Environmental Protection Agency) focusing on People, Prosperity, and the Planet.
 - Funding from U.S. Department of Energy for the *Save-A-Light and Energy Efficiency Workshop*. This grant (\$7500) from the Energy Star Program of the U.S.D.O.E. Energy Efficiency and Renewable Energy Division (EERE) provided funding to organize and facilitate a national-level workshop as the DOE Energy Star national Save-A-Light project for 2006. The workshop was featured on the DOE-EERE website including video.
 - Muncie CLEAN Grant (\$9,040) was funded by the East Central Indiana Solid Waste District to continue initiatives begun the previous year by the “Support to Indiana CLEAN Business Fellows” project.
 - Year-Four funding for the *US-Brazil Sustainability Consortium* (approximately \$60,000 for year 4)
 - Year-Three funding for the *North American Sustainability, Housing and Community Consortium* (approximately \$60,000 of the year 3)
 - Research continued on “*Field Station and Environmental Learning Center Strategic Planning and Charette*” (Badger, Brown and Motloch) project (\$24,000; 2005-2007) funded by the National Science Foundation

Y N Goal

2. Members of the unit have published on issues of sustainability in their discipline.

Selected Faculty Publications and Paper Presentations include:

- Book manuscript in progress addressing green building materials called *Materials for Sustainable Sites* estimated publication date 8/08, John Wiley & Sons

- Two chapters in *Landscape Architecture Graphic Standards*: “Sustainable Site Design”, “Concrete: Environmental and Human Health Considerations”. Hoboken, N.J.: John Wiley & Sons. Hopper, L. ed)
- Three chapters in *Landscape Architecture Graphic Standards, Student Edition*: “Sustainable Site Design”, “Environmental Impact Assessment of Building Materials/Products”, “Concrete: Environmental and Human Health Considerations”. Hoboken, N.J.: John Wiley & Sons. Hopper, L. (ed)
- Twelve articles in *Landscape Architecture* magazine on sustainable use of construction materials between 2000 and 2007
- Article in the *Journal of Green Building*, Vol 2 November 2006. “The Adoption of a Building Innovation: Barriers to Use of Green Roofs Experienced by Midwest Architects and Building Owners”.
- Article in journal *Landscape and Urban Planning*, “Strategy Use and Challenges of Ecological Design in Landscape Architecture”. August 2005, v.95, n.1.
- GIS Assessment Maps in Proposed Pedestrian and Bicycling Plan for Indianapolis, IN by Storrow Kinsella Associates, November, 2004.
- “Reading, Restoring, and Relating Indiana's Landscapes” presentation at the Association for Study of Literature and the Environment, June, 2001.
- “Environmentally Sensitive Wildlife Rehabilitation,” presentation at the National Wildlife Rehabilitator's Annual Conference, March, 2001.
- “Landscape Ecology Principles, Land-Use Planning, and GIS,” presentation at National GIS Day, Ball State University, November, 2000.
- Four Papers at 13th International Sustainability Conference (Sweden) including 2 papers in the industrial symbiosis track.
- One session chair and 2 papers in the Environmental Management and Sustainable Universities Conference.
- Two papers in Greening of the Campus conferences
- Two papers in the US-Brazil Consortium Program (FIPSE)
- One paper in the North American Consortium Program (FIPSE)
- Two articles published in *Journal of Cleaner Production*, in a special issue devoted to sustainability in higher education (*Journal of Cleaner Production, Special Issue on Sustainability in Higher Education: What is Happening?*), vol. 14, #9-11, 900-905. These two refereed articles include “Cross-Cultural Education for Sustainability: Development of an Introduction to Sustainability Course” (Vann, J.; Pacheco, P.; & Motloch, J.) and “Second-Chance Game: Local (University-Community) Partnerships for Global Awareness and Responsibility” (Pacheco, P.; Motloch, J.; Vann, J.).
- “Sustainability for the Americas: Building the American Network of Sustainability Consortia” (Motloch, J.; Pacheco, P.; Vann, J. W.) in the *International Journal for Sustainability in Higher Education*, vol. 8 (issue 3).
- In the past year, five (5) papers were published in some form in conference proceedings. Three were published in paper form; two were published on-line. The three papers in paper-form conference proceedings included papers accepted the previous year and published in 2006. Two of these papers -- “Sustaining the U.S.-Brazil Sustainability Consortium through project partnering” (Motloch J. & Casagrande, E.) and “Integrating social and Environmental Needs to the U.S.- Brazil Sustainability Consortium: A proposal for the Metropolitan Region of Curitiba, Brazil” (Casagrande, E.; Wendelin, S. & Motloch, J.) -- were published in the *Proceedings of the Fifth Annual US-Brazil Higher Education Consortia Meeting*, 2005, Washington. The third paper -- “Integrating social and Environmental Needs to the U.S.- Brazil Sustainability Consortium: A proposal for the Metropolitan Region of Curitiba, Brazil” (Casagrande, E.; Wendelin, S. & Motloch, J.) -- was published in the *Proceedings of the Fifth Annual US-Brazil Higher Education Consortia Meeting*. Washington: Howard University, 2005. v. 1. p. 12-19.

Y N Goal

3. Members of the unit attend conferences that address issues of sustainability.

- Presented at the US Green Building Council Conferences in 2002, 2004
- Presented "Ecological Design Project Delivery Processes of Vanguard Practitioners and Implications for Education in Landscape Architecture. At CELA conference, Athens, Georgia, September 2005.

Y N Goal

4. Members of the unit belong to associations dedicated to sustainability issues.

- ASLA; ASLA Professional Interest Groups; USGBC

Y N Goal

5. The unit has hosted workshops on issues of sustainability.

- Unit co-sponsored a USGBC LEED Technical workshop in April 2006
- Hosted ICREED Renewable Energy workshop at BSU
- Hosted Gunter Pauli ZERI workshop
- Envisioned, obtained funding (from US Department of Energy) and facilitated Save-a-Light and Energy-efficient Workshop (National DOE Project) implemented by BioTown Business Fellows
- LEED Workshop in Elkhart (part of Business Fellows)
- Emens Visiting Professor Workshops: The GreenLine. Central Indiana Mass Transit and Sustainable Development initiative.

Y N Goal

6. The unit has hosted conferences on issues of sustainability.

Community Service and Outreach

Y N Goal

1. The unit engages in public and/or outreach activities that address issues of sustainability.

- Active in the US Green Building Council, Sustainable Sites Technical Advisory Group 2003-2007
- Sustainable Sites Initiative Materials and Waste Technical Advisory Group 2005-present
- Lecture on LEED and LEED sustainable Sites to Emerging Green Builders group 2004-2007
- East Central Audubon Society – Newsletter Committee
- Volunteer, Wildlife Rescue House
- Garden Club lectures
- Muncie CLEAN and Elkhart CLEAN Projects (part of Indiana CLEAN Business Fellows class)
- Member, BioTown Task Force, Indiana Governor's appointment.
- Member, Muncie Green initiative
- Chair, Vendors Committee, Lightly Lightly Fair, Muncie
- Ohio River Workshop (Brownfields Redevelopment), Louisville.
- Two international design-build studios provided service to communities in Mexico
- LEED Workshop in Elkhart (part of Business Fellows)
- Resource person BSU Council of the Environment (COTE)

Y N Goal

2. The unit is in partnership with others in the community in the pursuit of sustainability.

- College of Architecture and Planning representative to Ball State University's Committee on the Environment
- Officer, ASLA Sustainable Design and Development Professional Interest Group

- Cardinal Greenway Executive Committee

Y N Goal

3. The unit participates in community events that address issues of sustainability.

- Co-chair of Vendor committee for *East Central Indiana Muncie/Delaware County Living Lightly Fair 2008*
- Director of Media and Marketing Committee Living Lightly, East Central Indiana's 1st Sustainability Fair, 2007

Y N Goal

4. The unit has initiated community endeavors in pursuit of sustainability.

- White river Ecological Visioning Workshop
- Design Build projects – Minnetrista,
- Bedford Indiana Community Charrette
- Reynolds Indiana Community Charrette
- Community based studio projects
- Ecological restoration workshop
- Zeri workshop
- Jesse Corabunda (ICREED)

Existing conditions as baseline (data as available)

In preparing our short-form responses to the questions in the previous section, we accumulated the following data sets. These comprise the numerical underpinnings specific to our Department.

A List of Academic Offerings

Topical Sustainability Lectures

- LEED Overlay components in all years of LA program, both Grad and Undergrad.
- Selections from Professional Coursework:
- LA 100: Site Analysis; Sustainable Materials; Bioengineering techniques.
- LA 301 Housing and Community Design - Conservation-oriented Housing Community Site planning and Design
- LA 311 lecture topics: understanding and applying Low Impact Development (LID)
- strategies and other basic green infrastructure solutions in solving small-scale site grading problems (website reviews, PowerPoint slide shows, basic concepts, project examples, etc. over approximately three 50-minute lectures)
- LA 401 and 604 – Introductory lecture, significant portion ASLA declaration on the environment
- Studio projects often deal with environmental and social sustainability issues.
- 635 LEED and sustainable site design
- LA 341 – All lectures focus on how plants are used in our urban landscape. Over 22 species are studied. Each species is discussed as to how well the plant may be sustained in the microclimate site. Seeing one species in several microclimates provides students with an understanding of sustainability.
- Cap 161 & 101 Chicago Design E2 Program from PBS & AutoDesk; Biomimicry and ordering systems; Site inventory and Analysis
- LA 201 Oil Crisis lecture in relationship to readings for the Gas Station Reinvention Project Site inventory and Analysis
- Sustainable development frameworks
- ZERI
- LEED
- Green building
- Sustainable Communities
- Integrated water-wastewater-energy-building-landscape systems

Topical Sustainability Modules

- LA 312 Engineering II – sustainability is addressed in every lecture and some entire lectures are devoted to the topic
- LA 653 Sustainable Design is a six week module in the course
- LA 301 Two projects have a sustainability focus
- Emens Professorships #1 – “Green Line” – Green Infrastructure Planning and Design - Nate Cormier, ASLA
- Emens Professorships #2 – “Green Line” – Green Transit-Oriented-Development Planning and Design - Jim Patchett, ASLA and David Yocca, ASLA. Conservation Design Forum.
- LA 401 and 604 – projects with environmental/sustainability focus.
- LA 311 lecture topics: understanding and applying Low Impact Development (LID)

- strategies and other basic green infrastructure solutions in solving small-scale site grading problems (website reviews, PowerPoint slide shows, basic concepts, project examples, etc. over approximately three 50-minute lectures)
- 413 stormwater management
- 413 parking (reduced heat island, sustainable stormwater)
- 413 grading for minimized land disturbance
- LA 645 and LA 342 These courses are divided into lectures that begin with identifiable ecosystems (modules). Wetlands, woodlands, etc. are modules within the course. Soil types are included
- LA 201 Gas Station Reinvention Project Rural Project/Greenline
- LEED Workshop in Elkhart (part of Business Fellows)

Sustainability Courses

- LA 371 Theories and Practices of Sustainable Site Design. (3)
- LA 471 Sustainable Land Systems. (3)
- LA 270 and LA 573 – Environmental Systems and Structures
- LA 310 – Design/Build
- LA 498/598 Healthy landscapes/Therapeutic Landscapes Elective
- Indiana Clean Business Fellows Course (including Muncie CLEAN and Elkhart CLEAN Projects)
- BioTown USA Business Fellows Course
- Taught Introduction to Sustainability as independent study course
- Reconnecting People and Place Summer Foreign Field Study

Sustainability Programs

- US-Brazil Sustainability Consortium
- North American Sustainability, Housing and Community Consortium
- Sustainability for the Americas Initiative

Sustainability Concentrations

- Interdepartmental Minor in Sustainable Land Systems

Sustainability Immersive On-and Off-Campus Experiences

- Cassata Creative Project addressed design of an Ecological Co-housing Community in Indianapolis, 2007
- World Tour 2/Polyark 16 - Spring 2004 - full semester global study travel – investigating/documenting and applying sustainable design and planning principles
- World Tour 3/Polyark 17 - Spring 2007- full semester global study travel – investigating/documenting and applying sustainable design and planning principles
- nature@play VBC seminar, fall 2006. Video game creation, Navigating Nature, with focus on teaching kids how to restore native ecosystems (wetlands, woodlands, prairies)
- EPA-P3 National Student Design Competition Presentation in Washington DC
- Reconnecting People and Place Summer Foreign Field Study including design-build
- Save-a-Light and Energy-efficient Workshop (National DOE Project)
- Semester sustainability exchanges in Brazil (USBSC)
- Semester sustainability exchanges in Mexico and Canada (NASHCC)
- Two international design-build studios

Existing conditions as baseline (data as available)

A List of Faculty, Staff and Student Activities

Professional Academic Organizations

- ASLA Members (10 of 14 faculty)
- LEED Certification:

Professional Staff Organizations

- Faculty attend ASLA and INASLA conferences, educational events
- Student Field Trips to noted Sustainable Site Designs in Portland, Seattle, Chicago and to ASLA green roof- national headquarters.

Student Associations and Clubs

Students Participate in:

- CAP/Emerging Green Builders, Student Association of the US Green Building Council
- Sigma Lambda Alpha – encouraging scholarly programs and events promoting landscape architectural education and its relationship to sustainable design training.
- Student Chapter, ASLA

Goals

Given our assessment of where things stand, we have identified the following goals for our unit.

Governance and Administration

- *Institute policies and directives which provide incentives/rewards for sustainable curricular development, scholarship, and sustainable professional practices: day to day office practice, travel, special training, etc.*
- *Host annual in-house Sustainable Land Charette/Workshop.*
- *Expand support for faculty travel to Sustainability related professional meetings.*
- *Host a Sustainable Sites Symposium.*
- *Expand faculty to include fully supported (.25 fte) Director of Land Design Institute and a (.25 fte) Sustainable Sites and Landscapes Coordinator.*

Operations

- *Consider restricted building access from midnight until 6am to encourages better student-time management, and facilitate building energy savings.*
- *Request that all Departmental facility renovation/remodeling to incorporate Green Building techniques, materials, and processes.*
- *Use Green Building/Facility renovations as transparent teaching tools.*
- *Create a Green Site Development Lab for exterior landscape of AB.*
- *Encourage use of elevators for moving items and only those that need elevator access due to mobility challenges and limitations.*
- *Use found/recycled items for projects instead of all virgin material.*
- *Recycle/reuse materials.*
- *Limit number of copies and double-side all copies.*
- *When possible, set all printers to double-sided by default.*
- *When possible and appropriate use digital copies and communication methods.*

Curriculum

- *Continue to encourage sustainability and LEED components for all courses.*
- *Offer Sustainable Site Design/LEED courses.*
- *Continue to support regular offering of Capstone course in Sustainable Land Systems Minor.*
- *Offer Service-Learning class with a focus on Sustainable Landscapes.*
- *Create a Sustainable Sites and Landscapes Distance Learning Course.*
- *Address carbon footprints associated with faculty travel and student field trips.*

Research

- *Inaugurate study on healthier CAP – material use, wellness, environmental conditions (from toxins to lack of color, minimal use of plants in the building).*
- *Provide research-based leadership in the area of Campus environmental design for Health and Healthy Living – from pedestrian and bicycle friendly to integration of native habitats, rain gardens, roof gardens, safe spaces, etc.*

Community Service and Outreach

- *Promote and recognize community projects with sustainability as a focus.)*

Implementation

We have aligned specific action items with the 5-year cycling of the Strategic Plan and anticipate being able to move forward in the respective categorical areas, as described below.

2008	Action Items	Resource Needs
	<p>Governance and Administration</p> <p><i>Institute policies and directives which provide incentives/rewards for sustainable curricular development, scholarship, and sustainable professional practices: day to day office practice, travel, special training, etc.</i></p> <p><i>Host annual in-house Sustainable Land Charette/Workshop.</i></p> <p>Operations</p> <p><i>Consider restricted building access from midnight until 6am to encourages better student-time management, and facilitate building energy savings.</i></p> <p><i>Request that all Departmental facility renovation/remodeling incorporate Green Building techniques, materials, and processes.</i></p> <p><i>Use Green Building/Facility renovations as transparent teaching tools.</i></p> <p><i>Encourage use of elevators for moving items and only those that need elevator access due to mobility challenges and limitations.</i></p> <p><i>Use reclaimed/recycled items for projects instead of all virgin material.</i> <i>Recycle/reuse materials.</i></p> <p><i>Limit number of copies and double-side all copies. When possible, set all printers to double-sided by default.</i></p> <p><i>When possible and appropriate use digital copies and communication methods.</i></p>	<p>\$5000., recurring</p> <p>\$7500., recurring</p>

Curriculum

Continue to encourage sustainability and LEED components for all courses.

Offer Sustainable Site Design/LEED courses.

Continue to support regular offering of Capstone course in Sustainable Land Systems Minor.

Offer Service-Learning class with a focus on Sustainable Landscapes.

Address carbon footprints associated with faculty travel and student field trips.

Research

Inaugurate study on healthier CAP – material use, wellness, environmental conditions (from toxins to lack of color, minimal use of plants in the building).

Provide research-based leadership in the area of Campus environmental design for Health and Healthy Living – from pedestrian and bicycle friendly to integration of native habitats, rain gardens, roof gardens, safe spaces, etc.

Community Service and Outreach

2009	Action Items	Resource Needs
Governance and Administration		
	<i>Expand support for faculty travel to Sustainability related professional meetings.</i>	\$5000. , recurring
	<i>Host a Sustainable Sites Symposium.</i>	\$7500.
	<i>Institute policies and directives which provide incentives/rewards for sustainable curricular development, scholarship, and sustainable professional practices: day to day office practice, travel, special training, etc.</i>	\$5000. , recurring
	<i>Host annual in-house Sustainable Land Charette/Workshop.</i>	\$7500., recurring
Operations		
	<i>Create a Green Site Development Lab for exterior landscape of AB.</i>	\$2000., recurring
	<i>Consider restricted building access from midnight until 6am to encourages better student-time management, and facilitate building energy savings.</i>	
	<i>Request that all Departmental facility renovation/remodeling incorporate Green Building techniques, materials, and processes.</i>	
	<i>Use Green Building/Facility renovations as transparent teaching tools.</i>	
	<i>Encourage use of elevators for moving items and only those that need elevator access due to mobility challenges and limitations.</i>	
	<i>Use reclaimed/recycled items for projects instead of all virgin material. Recycle/reuse materials.</i>	
	<i>Limit number of copies and double-side all copies. When possible, set all printers to double-sided by default.</i>	
	<i>When possible and appropriate use digital copies and communication methods.</i>	

<p>Curriculum</p> <p><i>Create a Sustainable Sites and Landscapes Distance Learning Course.</i></p> <p><i>Continue to encourage sustainability and LEED components for all courses.</i></p> <p><i>Offer Sustainable Site Design/LEED courses.</i></p> <p><i>Continue to support regular offering of Capstone course in Sustainable Land Systems Minor.</i></p> <p><i>Offer Service-Learning class with a focus on Sustainable Landscapes.</i></p> <p><i>Address carbon footprints associated with faculty travel and student field trips.</i></p> <p>Research</p> <p><i>Provide research-based leadership in the area of Campus environmental design for Health and Healthy Living – from pedestrian and bicycle friendly to integration of native habitats, rain gardens, roof gardens, safe spaces, etc.</i></p> <p>Community Service and Outreach</p>	<p>\$5000.</p>
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2010	Action Items	Resource Needs
Governance and Administration		
	<i>Expand faculty to include fully supported (.25 fte) Director of Land Design Institute and a (.25 fte) Sustainable Sites and Landscapes Coordinator.</i>	\$40,000, recurring annually
	<i>Expand support for faculty travel to Sustainability related professional meetings.</i>	\$5000. , recurring annually
	<i>Institute policies and directives which provide incentives/rewards for sustainable curricular development, scholarship, and sustainable professional practices: day to day office practice, travel, special training, etc.</i>	\$5000. , recurring annually
	<i>Host annual in-house Sustainable Land Charette/Workshop</i>	\$7500., recurring annually
Operations		
	<i>Create a Green Site Development Lab for exterior landscape of AB.</i>	\$2000., recurring annually
	<i>Consider restricted building access from midnight until 6am to encourages better student-time management, and facilitate building energy savings.</i>	
	<i>Request that all Departmental facility renovation/remodeling incorporate Green Building techniques, materials, and processes.</i>	
	<i>Use Green Building/Facility renovations as transparent teaching tools.</i>	
	<i>Encourage use of elevators for moving items and only those that need elevator access due to mobility challenges and limitations.</i>	
	<i>Use reclaimed/recycled items for projects instead of all virgin material. Recycle/reuse materials.</i>	
	<i>Limit number of copies and double-side all copies. When possible, set all printers to double-sided by default.</i>	
	<i>When possible and appropriate use digital copies and</i>	

<p><i>communication methods.</i></p> <p>Curriculum</p> <p><i>Offer the Sustainable Sites and Landscapes Distance Learning Course.</i></p> <p><i>Continue to encourage sustainability and LEED components for all courses.</i></p> <p><i>Offer Sustainable Site Design/LEED courses.</i></p> <p><i>Continue to support regular offering of Capstone course in Sustainable Land Systems Minor.</i></p> <p><i>Offer Service-Learning class with a focus on Sustainable Landscapes.</i></p> <p><i>Address carbon footprints associated with faculty travel and student field trips.</i></p> <p>Research</p> <p><i>Provide research-based leadership in the area of Campus environmental design for Health and Healthy Living – from pedestrian and bicycle friendly to integration of native habitats, rain gardens, roof gardens, safe spaces, etc.</i></p> <p>Community Service and Outreach</p> <p><i>Promote and recognize community projects with sustainability as a focus.</i></p>	<p>\$5000., recurring annually</p>
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2011	Action Items	Resource Needs
Governance and Administration		
	<i>Expand faculty to include fully supported (.25 fte) Director of Land Design Institute and a (.25 fte) Sustainable Sites and Landscapes Coordinator.</i>	\$40,000, recurring annually
	<i>Expand support for faculty travel to Sustainability related professional meetings.</i>	\$5000. , recurring annually
	<i>Institute policies and directives which provide incentives/rewards for sustainable curricular development, scholarship, and sustainable professional practices: day to day office practice, travel, special training, etc.</i>	\$5000. , recurring annually
	<i>Host annual in-house Sustainable Land Charette/Workshop</i>	\$7500., recurring annually
Operations		
	<i>Create a Green Site Development Lab for exterior landscape of AB.</i>	\$2000., recurring annually
	<i>Consider restricted building access from midnight until 6am to encourages better student-time management, and facilitate building energy savings.</i>	
	<i>Request that all Departmental facility renovation/remodeling incorporate Green Building techniques, materials, and processes.</i>	
	<i>Use Green Building/Facility renovations as transparent teaching tools.</i>	
	<i>Encourage use of elevators for moving items and only those that need elevator access due to mobility challenges and limitations.</i>	
	<i>Use reclaimed/recycled items for projects instead of all virgin material. Recycle/reuse materials.</i>	
	<i>Limit number of copies and double-side all copies. When possible, set all printers to double-sided by default.</i>	
	<i>When possible and appropriate use digital copies and</i>	

<p><i>communication methods.</i></p> <p>Curriculum</p> <p><i>Offer the Sustainable Sites and Landscapes Distance Learning Course.</i></p> <p><i>Continue to encourage sustainability and LEED components for all courses.</i></p> <p><i>Offer Sustainable Site Design/LEED courses.</i></p> <p><i>Continue to support regular offering of Capstone course in Sustainable Land Systems Minor.</i></p> <p><i>Offer Service-Learning class with a focus on Sustainable Landscapes.</i></p> <p><i>Address carbon footprints associated with faculty travel and student field trips.</i></p> <p>Research</p> <p><i>Provide research-based leadership in the area of Campus environmental design for Health and Healthy Living – from pedestrian and bicycle friendly to integration of native habitats, rain gardens, roof gardens, safe spaces, etc.</i></p> <p>Community Service and Outreach</p> <p><i>Promote and recognize community projects with sustainability as a focus</i></p>	<p>\$5000., recurring annually</p>
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2012 Action Items	Resource Needs
<p>Governance and Administration</p> <p><i>Expand faculty to include fully supported (.25 fte) Director of Land Design Institute and a (.25 fte) Sustainable Sites and Landscapes Coordinator.</i></p> <p><i>Expand support for faculty travel to Sustainability related professional meetings.</i></p> <p><i>Institute policies and directives which provide incentives/rewards for sustainable curricular development, scholarship, and sustainable professional practices: day to day office practice, travel, special training, etc.</i></p> <p><i>Host annual in-house Sustainable Land Charette/Workshop.</i></p>	<p>\$40,000, recurring annually</p> <p>\$5000. , recurring annually</p> <p>\$5000. , recurring annually</p> <p>\$7500., recurring annually</p>
<p>Operations</p> <p><i>Create a Green Site Development Lab for exterior landscape of AB.</i></p> <p><i>Consider restricted building access from midnight until 6am to encourages better student-time management, and facilitate building energy savings.</i></p> <p><i>Request that all Departmental facility renovation/remodeling incorporate Green Building techniques, materials, and processes.</i></p> <p><i>Use Green Building/Facility renovations as transparent teaching tools.</i></p> <p><i>Encourage use of elevators for moving items and only those that need elevator access due to mobility challenges and limitations.</i></p> <p><i>Use reclaimed/recycled items for projects instead of all virgin material.</i> <i>Recycle/reuse materials.</i></p> <p><i>Limit number of copies and double-side all copies. When possible, set all printers to double-sided by default.</i></p> <p><i>When possible and appropriate use digital copies and</i></p>	<p>\$2000., recurring annually</p>

<p><i>communication methods.</i></p> <p>Curriculum</p> <p><i>Offer the Sustainable Sites and Landscapes Distance Learning Course.</i></p> <p><i>Continue to encourage sustainability and LEED components for all courses.</i></p> <p><i>Offer Sustainable Site Design/LEED courses.</i></p> <p><i>Continue to support regular offering of Capstone course in Sustainable Land Systems Minor.</i></p> <p><i>Offer Service-Learning class with a focus on Sustainable Landscapes.</i></p> <p><i>Address carbon footprints associated with faculty travel and student field trips.</i></p> <p>Research</p> <p><i>Provide research-based leadership in the area of Campus environmental design for Health and Healthy Living – from pedestrian and bicycle friendly to integration of native habitats, rain gardens, roof gardens, safe spaces, etc.</i></p> <p>Community Service and Outreach</p> <p><i>Promote and recognize community projects with sustainability as a focus</i></p>	<p>\$5000., recurring annually</p>
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