Appendix E: Campus Operations, Organizational Polices, and Initiatives in Sustainability at UF

CAMPUS OPERATIONS

Office of Sustainability, College of Design, Construction and Planning, 1999-2004

Proposed and won unanimous Faculty Senate approval of a plan to empanel the UF Sustainability Task Force, crafted their charge, lobbied the administration, and won Presidential support and budget.

At the direction of the President, staffed the UF Sustainability Task Force, 2001-2004, organized 50+ meetings on and off campus, kept all records, interfaced with press and other universities, published their Final Report.

Crafted two Resolutions that won unanimous Faculty Senate support for the outcomes of the UF Sustainability task Force.

Published the first set of university sustainability metrics compiled in accord with international business reporting guidelines, the "University of Florida Sustainability Indicators, August 2001."

Organized and chaired an international panel of higher education personnel aimed at adopting a standard approach to sustainability reporting for all colleges and universities.

Sat on an EPA Task Force designed to evaluate and adopt standard metrics for environmental performance reporting among the nation's colleges and universities.

Organized and produced the 2001 UF Conference on Sustainability, keynoted by Michigan President Lee Bollinger and Dow Jones Sustainability Index designed Alexander Zhender. Over 200 people attended the conference that resulted in 10 newspaper stories, several radio and TV reports, and published proceedings.

Organized the UF Zero-Waste initiative. Developed plans for a partnership with Publix Supermarkets, the Athletic Association, and Aramark to compost food wastes from campus and community. Performed Homecoming zero-waste program in the O'Connell Center and football skyboxes in 2003 and 2004 in cooperation with UAA, Florida Blue Key, Student Activities, the Alumni Association, the City of Gainesville, Alachua County, IFAS, and Sumter County.

Organized and staffed university-wide ad hoc staff committees related to purchasing, energy, and waste reduction. Identified projects for energy conservation, developed new environmental purchasing policy that was adopted, advanced public-private partnership towards zero-waste food composting at County facility.

Organized and managed Carbon-neutrality research, planning and reporting. Developed web-based, queryable data base of all UF facilities ten-year energy use history that allows users to model energy conservation practices for a discrete facility or unit and predict carbon reduction, cost savings, etc. These efforts were reported on in the Wall Street Journal and in a Weather Channel documentary.

Worked to convene a global sustainability conference of university presidents in Tailliores France in cooperation with UNESCO, the IAU, and other notable universities in an effort to advance a vision for the UN Decade of Sustainability in Higher Education (2005-2014).

Organized and hosted dozens of "Conversations in Sustainability" workshops which hundreds of interested faculty, staff students, and community members have attended, press reports have been generated, and visiting speakers have participated.

Assisted organizing and marketing a "Certificate in Sustainable Construction," distance education program through the School of Building Construction.

Organized and managed a highly successful Honors Course in Sustainability (BCN 4905) in 2004 that filled with students 20 minutes after opening.

Raised >$300,000 in research grant, matching campus and community money, sufficient to fund director and 3 GRAs, programming, and related activities during the period.

Conducted an annual "Carbon Diet" award survey among dozens of UF and community offices in an effort at spotlighting dedicated and innovative office activities that reduce energy consumption and climate change.

Conducted an annual Earth Week series of programs for students and community members and the press.

Gave dozens of guest lectures, presentations, and so forth for various UF classes, clubs, professional associations, academic conferences, Student Government, and individual students etc—and acted as a discrete point of contact for UF students, community members, and press inquiries relating to sustainability at UF.

Mentored students in the Reitz Scholars program.

Delivered papers and/or made presentations at many national and international meetings in an effort to raise UF's visibility on sustainability issues including:

- National Academy of Engineering: UF's Sustainability Initiative, 2004
- Association of Institutional Research: GRI, 2004
- Dartmouth College: GRI feasibility project, 2003
- American Association of College and Universities, 2004

- Yale University: Strategic Greening Symposium, 2004
- Ball State University Campus greening Conferences (2001, 2003)
- ICLEI Climate Change Consortium, Univ. Michigan, 2000, Seattle, 2001
- University of Tennessee sustainability conference 2001
- Florida Pollution Prevention Roundtable conference, 2002
- World Resource Institute BELL conference, 2003
- UF Campus sustainability conference 2001

Audubon Cooperative Sanctuary Certification

In 2001 the university initiated the process to achieve campus-wide designation as an Audubon International Cooperative Sanctuary, thereby becoming a pilot as the first university nationally to participate in the program that was originally developed for golf courses and corporate offices. Audubon Cooperative Sanctuary Programs promote ecologically sound land management and the conservation of natural resources through education and certification programs that are tailored to a diversity of land uses within communities. Participation helps organizations plan, organize, implement, and document a comprehensive environmental management program and receive recognition for their efforts. In March 2003 the University of Florida submitted its resource packet for Phase I of the Audubon Cooperative Sanctuary Program. In July 2003, the ACSP responded with a Certification Status Report conferring approval of Phase I - Environmental Planning. Implementation and monitoring phases are ongoing. The Audubon certification was shepherded by a committee now known as the Ecology, Conservation and Stewardship Committee, or ECOS for short. http://www.facilities.ufl.edu/cp/ecos.htm

Biomass Gasification

The University has teamed with Progress Energy and with other universities to pursue the use of waste material, such as the sludge from the wastewater treatment facility and lawn clippings, to generate gas. This gas will be used as fuel in gas turbine generators or to fire boilers which provide steam to turbine generators; both set-ups are on campus now. Until recently, this was thought to be feasible, but economically unjustified. The University has honed the technology associated with biomass gasification, and the world market cost of gas has done the rest.

Campus Planning: Comprehensive Master Plan 2005-2015

The Facilities Planning and Construction Division is updating the campus Comprehensive Master Plan for the years 2005-2015, which will incorporate ongoing sustainability efforts. Already, the master planning process has focused on analyzing natural constraints on campus such as wetlands and habitats that should be protected from development. A series of visioning workshops in 2003 confirmed the importance of sustainability and environmental issues within the campus community. The campus master planning process will incorporate this feedback, and utilize faculty expertise and student resources to the fullest extent possible. Some of the data collection tasks are being accomplished with faculty and student assistance. Committees were formed in Fall 2004 to include faculty, student, staff and community representatives to help shape the master plan within a sustainable and environmentally responsible framework. http://www.masterplan.ufl.edu/

Clean Water Campaign

The UF Clean Water Campaign is a cooperative public education initiative spearheaded by UF/IFAS Extension and the UF Physical Plant Division. Its mission is to build awareness of water quality issues and solutions on the UF campus. The University's Clean Water Campaign has designed and installed stickers to identify storm drains discharging to Lake Alice so that people will know not to dump hazardous materials such as litter, paint or motor oil into the drains. This program began in 2003. The City of Gainesville employs a similar program for creeks in the community. http://campuswaterquality.ifas.ufl.edu/

Cogeneration Plant

The Progress Energy cogeneration plant at the University of Florida began operation 1994. The plant supplies the steam requirements of the University and provides a local source of power for Progress Energy's system. Most of the steam is produced in the heat recovery steam generator from the hot exhaust leaving the gas turbine that drives the electric generator. The heat recovery improves the efficiency of the generating plant and reduces the need to direct fire boilers to produce steam. The cogeneration plant was the first such plant to use reclaimed water as the primary water source. The plant normally operates as a closed system in conjunction with the UF wastewater plant, receiving reclaimed water at the discharge and returning effluent to the wastewater plant's intake.

Community Gardens

In operation for several decades, the Community Gardens are utilized by faculty staff and students. They are particularly popular among students living in the adjacent married student housing complex, lending the gardens a distinct international quality. They are located on Museum Road, adjacent to the Bat House at Lake Alice.

Conservation Area Land Management Plan (CALM)

A Conservation Land Management Plan is being prepared by the Facilities Planning and Construction Division in collaboration with students, faculty and staff including the Physical Plant Division, Environmental Health & Safety Division, University Police Department and IFAS Facilities Planning Division. The Plan will detail the steps necessary to maintain over 300 acres of designated Conservation Areas on the university campus. Plant and wildlife inventories, as well as wetland delineations, are part of the data collection that will support the next Master Plan and prescribe certain management strategies. Management plan strategies for individual conservation areas include removal of non-native invasive plant species, provision of educational signage, fencing, trails/boardwalks and habitat enhancement. http://www.facilities.ufl.edu/cp/clmp.htm

Eastside Campus

In 2003, the University accepted an additional 14 acres of state land for university use. The site, located in the economically depressed east Gainesville area, was formerly used as a complex of offices, warehouses, testing laboratories and equipment maintenance facilities of the Florida Department of Transportation, State Materials Office. Prior to the FDOT use, the site had been a prison camp in the late 1800's until around 1920. After more than a century of industrial-type institutional use, the site is an urban brownfield in dire need of rehabilitation, hazardous material abatement, and resurrection as a vibrant economic and employment center. The UF intends to use this site for administrative offices and academic research facilities (offices, laboratories and training rooms). Several buildings will be demolished and others will be renovated. A concept site plan has been prepared and the site has been amended into the Campus Master Plan. Long-term site improvements include on-site stormwater treatment, landscaping and environmental clean-up. Ultimately, this new Eastside Campus will be an employment center for 400-500 university faculty and staff. Although the task is challenging, the University is proud that its

Eastside Campus will revitalize an existing urban area, rather than create new impacts on pristine undeveloped land. http://www.masterplan.ufl.edu/

Energy & Water Conservation

The primary functions for the Office of Energy Conservation, within the Physical Plant Division, include monitoring the campus energy consumption, lowering energy consumption and incorporating new, efficient technologies for use at the University of Florida. Currently, the university is engaged in building evaluations and scheduling in order to curb current consumption trends. Between 1995 and 2000, steam, potable water, and electric usage declined although building construction and enrollment grew dramatically. During this same period, chilled water consumption grew, but at a declining annual rate. Consumption of natural gas increased, although this is a relatively cleaner fuel source. The period between 1998 and 2001, saw dramatic decreases in overall energy consumption due to retrofitting of light fixtures, HVAC operating schedules and installation of energy efficient motors and chillers. Future plans include an automated meter reading system, improved building control systems and research into various building systems that lower energy consumption. The Office of Energy Conservation has established energy contacts throughout campus to assist in the lowering of campus energy consumption. This practice has helped to foster an awareness of energy conservation issues on campus. Currently, the University of Florida spends an average of $2.1 million per month for electricity alone. Locating waste usage of electricity can reduce this figure. Online 'Energy Conservation Tips' are available to help educate the university community on saving energy. http://www.ppd.ufl.edu/operations-energy.html

Green Buildings

In 2001, the university adopted Leadership in Energy and Environmental Design (LEED) criteria for design and construction for all major new construction and renovation projects to deliver high performance and sustainable building design to the University of Florida. Eight of the thirty LEED-registered buildings in the State of Florida exist on the UF campus. The M. E. Rinker Hall-School of Building Construction, is certified Gold – the highest certification level. The Orthopaedic Surgery and Sports Medicine Institute will apply for Silver certification. The UF Facilities Planning and Construction Division is the first in Florida to require a LEED-accredited professional on staff to oversee implementation of LEED strategies and certification. http://www.facilities.ufl.edu/sustain/index.htm

Green Fleet

In July 2003, the Facilities Planning and Construction Division purchased one of the first green vehicles on campus. The GEM electric vehicle reduces harmful pollution, as the environmental friendly machine releases no tail pipe or evaporative emissions. Zero emission is a win-win solution for the campus. Several administrative divisions on the UF campus are testing green fleet alternatives. The Transportation and Parking Division also purchased a GEM car and a Segway personal human transport vehicle, both operating on electricity. http://www.facilities.ufl.edu/

Historic Preservation Plan

Tracing its roots to a parent institution founded in 1853, the University of Florida celebrated its sesquicentennial in 2003. The Campus Historic District of 22 buildings listed in 1989 on the National Register of Historic Places, and the Memorandum of Agreement with the State Historic Preservation Office demonstrate the commitment of the University to preservation of the campus. Information on campus history and past planning efforts has been archived at the George A. Smathers Libraries. In July 2003, the University received two grants for the purpose of developing preservation standards and expanding the current preservation efforts. A $150,000 three-year grant has been awarded by the Getty Grant Program for the development of a Preservation Plan and Guidelines, which will supply the university with the information and tools to accomplish its long-range goals. In addition, the university received a $25,830 grant from the State of Florida, Historical Grants-In-Aid. This grant identified and proposed additional buildings that are eligible for National Register of Historic Places listing. It also produced an updated historic campus walking tour map and other materials in support of the overall Preservation Plan and Guidelines. This planning effort is a comprehensive collaboration of an academic department in the College of Design, Construction and Planning with the UF Facilities Planning and Construction, and Physical Plant Divisions. http://www.facilities.ufl.edu/cp/hpp.htm

Irrigation with Reclaimed Water

The three million gallon a day Water Reclamation Facility was built in 1994. The shift from well and potable water to reclaimed water for irrigation was started at that time. In 1999, a dedicated plan was initiated to bring as much of

the campus onto the reclaimed system as possible. With the exception of some distal areas, most of the University's campus is served by the reclaimed water system.

Organic Gardens

Since the early 1970's, the Organic Garden Cooperative has administered organic garden plots on the University campus. These plots are open to faculty, staff and students who cultivate plots year round. A limited number of community gardeners are also active on the site. The original site was on Radio Road, but has since moved to an area near SW 23rd Terrace. The gardens include 75 plots cultivated by nearly 100 individuals.

President's Home Garden Restoration

With the arrival of President and Mrs. Machen in 2004, the wooded area adjoining the President's residence has been reworked to incorporate numerous butterfly-attracting plants. This project, a companion to the new McGuire Center for Lepidoptera Research and Butterfly Rainforest will serve to informally educate community members about the important role butterflies play as indicators of healthy environments.

Recycling

The University Solid Waste Management Office manages the collection and disposal of all solid waste generated through University operations, including medical waste. It also manages the University's Recycling Program and provides collection and recycling services for paper, corrugated containers, beverage containers, scrap metal, pallets, masonry, yard waste and other widely used materials. Although a few items were sporadically recycled during the mid-1980s, a formal campus-wide recycling program was initiated in August 1989. In FY 00-01, about 36% (6,530 tons) of the university waste stream was recovered and recycled. With the re-opening of a local concrete recycling facility in February 2001 (and other actions), the University's recycling rate increased dramatically, averaging 45% for the first two months of FY 01-02. During FY 00-01, the University of Florida recycled 6,530 tons of material recovered from our waste stream. This amounts to an average of about 125.6 tons/week or over 25 tons per workday. http://www.ppd.ufl.edu/grounds-refuse.html

Transportation: Transit, Bicycling, Walking and Parking

Since 1997, UF has contributed increasing funds to the Regional Transit System (RTS). These funds come from the Concurrency Trust Fund, student fees and direct payment for operation of campus circulator and "Later Gator" routes. Funding increases have created growth in service and ridership for students and the general public. In 1999, UF students accounted for 66 percent of all RTS riders. During the first three years of UF contributions, non-student ridership on Gainesville's City bus routes also increased by 36 percent due to improved service. Between 1995 and 2003, the university's combined financial contributions toward RTS grew from $604,018 to $5,805,716. During that same period, total RTS ridership grew from 2,047,500 to 8,103,120 making it the fourth largest urban transit system in the State of Florida in terms of ridership.

UF's partnership with RTS has enabled the University to implement a parking management program to reduce the number of private vehicle trips made to and around the campus. The 1995 Master Plan and Campus Development Agreement allowed a maximum of 2,700 new parking spaces to be constructed by 2005. By the year 2000, 1,300 spaces were constructed leaving a balance of 1,400 spaces permitted. While the 2000-2010 Master Plan update extended the planning horizon for five more years, no additional increase in parking spaces were recommended.

As an urban campus near the center of the City of Gainesville, the university has always supported walking and bicycling as a way to get to campus and for travel within campus. Surveys in 2004 suggest that these non-auto modes are still quite popular with about 14% of employees, and 23% of students accessing campus by walking or bicycling. Thirty-five percent of students reported using buses as the primary mode to access campus. Comparatively, most communities report non-auto modes (including transit) to make up around 4-7% of trips to work (slightly higher for trips to school).

University Arboretum Renewal

At the University Arboretum conservation area on West University Avenue, neighborhood volunteers have joined students and staff for two clean-up workdays, and are organizing for a third. Several neighbors also donated funds to help fund a fence that is now in place to protect against parking impacts. Beginning in 2003, the NW 23rd Street Neighborhood Association spearheaded a fundraising campaign to help pay for the fence with donations being

matched by university administration. The Neighborhood Association worked with the University to plant a native tree commemorating their Association President's leadership in these efforts.
http://www.facilities.ufl.edu/cp/clmp_plans.htm

University of Florida Bat House

The University of Florida bat house was constructed on the Gainesville campus in 1991, and now houses over 20,000 free-tailed bats. Each night the free-tailed bats in this one colony eat about 10-20 million insects, assuming that each bat consumes 500-1000 of the small insects this species prefers. This translates to roughly 220 pounds of leafhoppers, moths, midges, winged ants, beetles, and other night-flying insects removed from our yards, gardens, and farms every night based on the conservative assumption that each bat eats half its body weight in insects a night. Nursing mothers are known to eat up to 125% of their body weight in insects each night. These bats are living in a structure created specifically for them by the University of Florida and the University Athletic Association and now provide free pest control for the university and Gainesville. This is the largest occupied "bat house" in North America and perhaps the world. http://www.wec.ufl.edu/extension/bat_house.htm

Urban Forestry

An Urban Forester is employed at UF to be responsible for the health and safety of all trees on campus. A diverse and healthy tree canopy is the goal of our Urban Forestry Program. Trees are a significant feature of the University of Florida campus, they define the exterior of our buildings, they reduce our energy consumption through cooling, they provide food and shelter for wildlife, and the list goes on. When a tree is removed because of new construction, injury, or disease, it is unfortunate, but the university also sees an opportunity. Young trees are planted throughout the year to renew and refresh our dynamic tree canopy. Trees removed due to construction are replaced at a two-for-one rate, and sometimes more if the removed trees are substantially large or significant species.
http://www.ppd.ufl.edu/operations-urban.html

ORGANIZATIONAL POLICIES AND PRACTICES

Ad Hoc Joint Presidential/Senate Committee on Sustainability
Established as an ad hoc Task Force in 2000, the Sustainability Committee continues work that began with a grassroots movement known as Greening UF in 1997. The Task Force submitted its recommendations to the Faculty Senate and the Office of the President in 2002. To ensure the implementation of these recommendations, the current Sustainability Committee was formed in 2004.

The Committee on Sustainability will serve as the university's coordinating and representative body regarding all aspects of sustainability. It will report jointly to the Faculty Senate and to the President of the University or his designee. The committee will be active in all areas of campus sustainability including Research, Education, Campus Operations, Community Outreach and Integration, Campus Community and Organizational Policies and Practices. It is a Joint Committee of the University, appointed by and reporting jointly to the President and the Faculty Senate.

Carbon Neutrality
The Office of Sustainability developed an inventory of UF carbon emissions and a conceptual plan analyzing pathways by which UF can become carbon-neutral.

Ecology, Conservation and Stewardship Committee (ECOS)
The ECOS Committee was established to develop the application for Audubon certification and to oversee other campus wide conservation efforts, the VP for Finance and Administration empanelled this faculty-staff committee in 2001. http://www.facilities.ufl.edu/cp/ecos.htm

Global Reporting Initiative
The University of Florida in 2001 became the first higher education institution to use the established Global Reporting Initiative guidelines to publish its sustainability metrics.

Office of Disabilities
The University of Florida, under the guidelines of ADA and 504 federal legislation, is required to make reasonable accommodations to the known physical and mental limitations of otherwise qualified individuals with disabilities. To help provide the best possible service to students, staff, faculty and visitors, the University of Florida has an ADA Compliance Office with a coordinator responsible for access for persons with disabilities. The ADA coordinator assists anyone with questions about access. http://www.ada.ufl.edu/office/ada.htm

Talloires Declaration Signatory
In 1994, the University of Florida was one of 310 universities worldwide to sign the international Talloires Declaration pledging support to reduce environmental degradation and natural resource depletion.

Zero Waste
Beginning in 2003, the University Athletic Association partnered with the Powell Center's Office of Sustainability to reduce waste at football games. UAA is now planning to "zero-waste" activities within the skyboxes at all UF football games beginning in 2005.