

University of South Florida Sustainability Initiative Report.

Respectfully submitted on behalf of the Sustainability Steering Committee by
Associate Vice President for Academic Affairs and Strategic Initiatives, Linda
Whiteford on October 13, 2009

I. Moving USF Forward to a Sustainable Future

President Genshaft signed the American College and University Presidents Climate Commitment on April 12, 2009.¹ Subsequently, a Sustainability Initiative Steering Committee was formed with campus-wide participation and commitment. A survey of faculty in February 2009 on “Global Partnerships, Sustainability, and USF Programs” determined that approximately 70% of respondents reported that either their teaching, research, or service at USF related to sustainability. Of these 90 faculty respondents, approximately 60 teach courses, about 50 have publications, and around 40 consider their service as related to sustainability. Building on this existing strength, we see the following as a few benefits of achieving a sustainable future:

- Fits USF mission and strategic plan;
- Recruiting mechanism for outstanding students and faculty;
- Positioning USF in a globally competitive market;
- Making the Tampa region and Florida a location of innovation with increased economic and social benefits;
- Direct and indirect cost savings by greening the USF campus that can also be used as campus laboratory for undergraduate and graduate research and community outreach;
- Improved community relations through education programs, research, and outreach that have a direct positive impact on people, their neighborhoods, and future generations;
- Development of innovative education and research programs that have a strong societal and economic impact and make our graduates in-demand, highly engaged citizens, competitive in a regional and global economy, and connected as alumni;
- Integration of education, research, and outreach programs that are at the interface of natural, technological, and human social systems with an overarching drive for innovation and justice;
- Matches the university's strategic goals as well as the curricular and research interests of faculty, students, funding agencies, and donors;
- Will improve the health and productivity of faculty, staff, and students.

¹ The American College & University Presidents Climate Commitment is a high-visibility effort to address global warming by garnering institutional commitments to neutralize greenhouse gas emissions, and to accelerate the research and educational efforts of higher education to equip society to re-stabilize the earth's climate.

II. History of Sustainability Task Force

USF has a history of expertise in the area of sustainability but has lacked a centralized hub to harness the energy of the disparate efforts. However, since 2006 faculty, staff, and students from several colleges developed a number transformative green initiatives that gained recognition for the university. These included the Conversation on Green Building (2007 and 2008), The Going Green Tampa Bay Expo (Green Business Expo in partnership with Hillsborough City County Planning Commission—3000 attendees), Conserve-a-Bull (<http://ctr.usf.edu/egb/conservabull/> student housing energy challenge that resulted in over 40% energy savings in some residence halls), and community-based research projects (with organizations like the City of Clearwater, Lykes Corporation, and the East Tampa Redevelopment Office).

In addition, on April 12, 2008, President Judy Genshaft committed USF to embed the principles of sustainability within research, teaching, and action by signing the ACUPCC. Following this, in the summer of 2008, Whiteford convened the USF Sustainability Task Force (Figure 1). This resulted in 14 subcommittees engaged in a wide-array of sustainability initiatives on campus. To date, these committees have made significant strides in areas such as waste, recycling, purchasing, energy production, water, building, greenhouse gas emissions, and food service.

- III. Sustainability:** According to the UNEP, WWF and the IUCN, sustainability is the process of improving the quality of human life while living within the carrying capacity of supporting eco-systems. For the Sustainability Initiative we use the definition where human, environmental, material, and economic activities compose fundamentally integrated dimensions or a nexus of sustainability that are mutually reinforcing

Benefits

- Cost Savings
- Community Relations
- Educational Value
 - Matches the university's strategic goals as well as the curricular and research interests of faculty and students
- Fits with Campus Cultures and Values
- Health and Productivity
- Donor Interest
- Fits Mission of University

Opportunities

- to minimize our environmental footprint
- to work cooperatively with our community partners and strengthen our relations throughout the region
- to save money and resources
- to strengthen our reputation through our sustainability efforts

- to collaborate with other institutions to contribute to a healthy society and meet obligations to future generations

IV. Organization of Steering Committee & Subcommittees

Sharon Hanna-West	College of Business Administration (Co-Chair)
Robert Brinkmann	Department of Geography (Co-Chair)
Delcie Durham	Mechanical Engineering
Sara J. Hendricks	Center for Urban Transportation Research
Siva T. Prakash	Physical Plant Division
Daniel Yeh	Civil and Environmental Engineering
Barbara S. Donerly	Facilities Planning and Construction
Nainan Desai	Physical Plant Auxiliary Services
Elizabeth Kaplon	Housing & Residential Education
Linda Whiteford	Strategic Initiatives, Provost's Office (Convener)
Diana Trueman	Strategic Initiatives, Provost's Office (Staff)

- **Curriculum:** Evaluate what is being taught at USF in the area of sustainability. Evaluate how we compare to similar campuses. Develop a list of suggested changes/addition to enhance sustainability studies on campus.
- **Recycling and Waste Management:** Summarize what USF is doing in the area of recycling. Brainstorm on what else could be done. Prioritize key projects for the future. Develop initiatives as able. We must adopt 3 or more new approaches to reduce waste on campus in the coming year.
- **Media/Promotion:** Publish a newsletter each semester on the activities of the group. Get out word on meetings, events. Put out press releases as needed.
- **Greenhouse Gas Emissions:** Develop an inventory of the University Greenhouse Gas Emissions. Network with other subcommittees as needed.
- **Transportation:** Summarize what USF is doing in the area of green transportation. Brainstorm on what else could be done. Prioritize key projects for the future. Develop initiatives as able. Work with Greenhouse Gas Emissions Subcommittee to assist with greenhouse gas inventory.
- **Water:** Summarize what USF is doing in the area of water conservation and green practices associated with water consumption and wastewater management. Brainstorm on what else could be done. Prioritize key projects for the future. Develop initiatives as able.
- **Green Building:** Summarize what USF is doing in the area of green building. Brainstorm on what else could be done. Prioritize key projects for the future. Develop initiatives as able. Work with Greenhouse Gas Emissions Subcommittee to assist with greenhouse gas inventory.
- **Research:** Summarize key research themes in sustainability taking place on the USF campus. What specific research is being conducted on sustainable USF?
- **Finance:** Examine how the university can establish a policy or a committee that supports climate and sustainability shareholder proposals at companies where our institutions endowment is invested.
- **Procurement:** Examine current purchasing standards and examine how USF can move ahead in requiring the purchase of Energy Star certified products in all areas

for which such ratings exist. Examine how USF can offset greenhouse gas emissions generated by air travel paid for by our institution.

- **USF Alumni and Community:** Inform USF alumni and the community about sustainability efforts on campus. Seek input on activities taking place associated with sustainability. Invite alumni and the community to important events on campus.
- **Students:** Prioritize students concerns about campus sustainability. Brainstorm on what can be done to improve campus sustainability. Prioritize key projects for the future. Develop initiatives as able. Network with other subcommittees to keep the student body informed of activities.
- **Energy:** Summarize what USF is doing in the area of green energy. Brainstorm on what else could be done. Prioritize key projects for the future. Develop initiatives as able. Work with Greenhouse Gas Emissions Subcommittee to assist with greenhouse gas inventory.

V. Office of Sustainability

The USF Office of Sustainability was created in August, 2009 and a Director has been hired. Below are the duties of the new Director, as contained in the job description posted on the USF sustainability website, which also describes what the office will accomplish.

The Director works closely with the faculty, students, the regional campuses, and the Climate Commitment Steering Committee.

Primary responsibilities include:

- The overall management of the Office of Sustainability,
- The development of reports, programs, and policies related to operational sustainability for university facilities and infrastructure
- Responding to funding initiatives
- The development and execution of a strategic communication plan, and discussion of future academic plans
- The Director will work in close conjunction with Academic Affairs, which is responsible for the development of programs and policies relating to sustainability in teaching and research on campus

Examples of Duties:

- The Office will work with USF's Facilities/Planning and Physical Plant Offices and campus stakeholders to coordinate efforts to develop alternative energy sources, conserve water, enhance green space, and improve ecosystems on campus.
- Coordinate Environmental Activities on Campus. The Office will work with faculty, staff, and students to coordinate efforts to green the campus.
- Update and maintain the Office of Sustainability website.
- Coordinate Educational and Community-based Initiatives on Sustainability. The Office will assist faculty and students as needed on educational and community-based activities related to campus sustainability.

- Seek and Coordinate External Funding for Sustainability Related Campus Activities. There are a growing number of funding sources available for campus research on sustainability. The Office will seek funds to help support initiatives.
- Coordinate External Evaluations for Campus Sustainability. University campuses are evaluated by a number of organizations for their sustainability efforts. This Office will coordinate reporting as needed.
- Working with Academic Affairs to develop university-wide dialogue about a future School of Global Sustainability.

VI. Subcommittee Update Reports

A. Sustainability Student Committee Update

- The Student Group is in the planning and organizing stages for the Green Fee Campaign and the upcoming Expo and Campus/Community Conference.
- Since the meeting with SG, we are merging the Sustainability Students together with SG and other active student groups concerning the Green Fee.
- Regular email updates are being sent out to the Sustainability Student Group and we are inviting them to come forward to participate in this planning process!
- With the Expo and Campus/Community Conference - We are identifying leaders who are attending meetings and helping with the planning and organizing stages of these events. Planning for our group includes volunteer efforts (crowd control, parking etc.). We are just starting to look at helping to plan food/refreshment menus with Aramark.

Maya Trotz is also working in planning contests and expo items for student displays. she will be integral in planning these events with the cooperation of other professors and course instructors.

B. Green Building Subcommittee Update

The Green Building Subcommittee was formed to represent interested students, staff and faculty from several multi-disciplinary academic departments and administrative units. Participation is open to anyone interested. Participants currently include representatives from the USF student chapter of Emerging Green Builders (EGB); the USF School of Architecture +Community Design, the College of Engineering Department of Civil & Environmental Engineering; the USF Polytechnic campus; USF Physical Plant and USF Facilities Planning and Construction. The Green Building Subcommittee is co-chaired by the Assistant Director of Facilities Planning and Construction and an Assistant Professor with the University of South Florida School of Architecture +Community Design.

The Green Building Subcommittee began meeting in June 2008 to review the charge of the subcommittee and discuss the requirements and opportunities of the American College and University Presidents Climate Commitment to improve the sustainability of the campus and its impact on the region. The Subcommittee has continued to meet to

brainstorm various potential programmatic responses to reduce greenhouse gas emissions from the issues and opportunities pertaining to campus planning and building design and construction. Subcommittee representatives participated in regularly scheduled meetings of the Sustainability Steering Committee, the New North Transportation Alliance (NNTA), the Transportation Subcommittee, the Energy Subcommittee, Sustainable Tampa Bay, USGBC meetings, Eco-lution, and planning meetings for the 4th Annual Campus and Community Sustainability Conference and Going Green EXPO 2009 to be held at USF in October 2009.

Several Green Building Subcommittee representatives are LEED Accredited Professionals and have also given presentations at the 3rd Annual Campus and Community Sustainability Conference at the University of Central Florida in Orlando in October 2008; at the annual student-led EGB public Conversation on Green Building held at USF, and attended and spoken at numerous other conferences and symposiums. The committee members have been engaged in on-going sustainability efforts at USF and at the State level.

- Two of the student members led the very successful competition between residence halls to reduce energy consumption in the spring 2008 semester
- Four construction projects are currently in the process of design for LEED certification
- Two members teach sustainability and carbon neutrality at the graduate level in Architecture and Engineering
- One of the members with the USF School of Architecture and Community Design has been awarded a three year grant of \$344,000 to design and build a zero energy home (ZEH) learning center. Where students, faculty, and the community can go to learn about ZEH strategies and the latest technologies in Florida's hot and humid climate.
- Two members are staff mechanical engineers actively engaged in reducing campus infrastructure system energy consumption as well as in new and existing buildings.
- One member was asked to help rewrite the Board of Governors rules regarding the requirements for State University Campus Master Plans in order to ensure greater emphasis on sustainable practices in the planning of the Florida's public university campuses.

The Green Building Subcommittee has focused its efforts to develop a draft document that describes opportunities for USF to reduce Greenhouse Gas Emissions and contribute in positive ways toward carbon neutrality through improved campus planning and building design/construction practices. The document analyzes these opportunities in terms of Vision, Accomplishments, Opportunities, Barriers, and Action Plans.

The sections in the draft document include the following (in order to avoid extensive repetition, these are considered in addition to the practices spelled out in LEED guidelines):

Campus Planning:

- Site Planning
- Stormwater

- Transportation
- Recycling
- Landscape
- Irrigation

Building Design/Construction:

- General design
- Materials
- Energy Systems
- Water Conservation

Due to the nature of campus planning and building design/construction, some key elements overlap with other subcommittees and require further coordination as the committee continues its work.

C. Energy Subcommittee Update

At the first meeting of the subcommittee, the group discussed the charge and the three steps of the action plan presented on September 18, 2008.

Each member gave a brief description of his/her expertise and energy-related activities. The spectrum of expertise provides the committee with multiple perspectives on alternative energy sources and solutions, assessment metrics and tools, and the scope of energy consumption across the campus.

A considerable amount of time was focused on what is currently in place with regard to energy management at USF. Nainan Desai provided an overview on the improvements in energy efficiency that have been made over the past three years. These included the Green Light program, changes in the chiller equipment, and other energy conservation measures. We learned that building monitoring and controls had been automated for central energy management, and that data was gathered regularly.

The current configuration of the solar panels located at the CUTR carport was discussed. The group agreed that for Step 1 – assessing what USF has in place now should include finding a way to perform life cycle assessment and cost/benefit analysis on the current energy infrastructure. This would help identify any remaining “low hanging fruit” and provide a basis for the visioning activities in Step 2. We looked into ways to get student involvement next semester to assist with this analytical work that needed to be conducted. Following the meeting Jennifer Isenbeck provided project descriptions to Delcie Durham to distribute to undergraduates in Mechanical Engineering.

Step 2. Visioning exercise. The group agreed that before we initiated any visioning, we had to provide a documented assessment of where we are now (Step 1). At the Emerging Green Builders panel, Nainan Desai made an excellent presentation on the overall energy use over the past three years, and this will be supplemented with the energy use models for different types of campus buildings. The subcommittee plans to convene a campus-wide roundtable to generate various ideas around energy management and alternatives.

Step 3. Recommendations for future. Since energy is so interrelated with green buildings, research endeavors, educational needs, residential life, and transportation, as we move to the recommendation stage we will be consulting with these other subcommittees to assure that the comprehensive energy plan includes any impacts from their planned developments.

Energy Efficiency

- First replaced T12 fluorescent lamps and magnetic ballasts with F32 T8 fluorescent lamps and electronic ballasts under the Green Lights program. The second replacement - currently underway - includes replacing F32 fluorescent lamps with F28 T8 fluorescent lamps for all campus buildings in excess of 4 million sq.ft;
- Installed motion sensing light switches in classrooms, conference rooms in existing and new buildings;
- Replacing incandescent traffic lights with LED traffic lights - a current project.
- Modified University standards to Induction lighting for street and walkway lighting for current and future projects.
- Installed Heat Pipe heat recovery systems in air handling units with 100% outdoor air.
- Converting chilled water distribution system from Primary/Secondary pumping to variable primary type to reduce energy use in pumping and to improve chiller efficiency.
- Installed economizers on boiler stacks to recover heat from boiler stacks to pre-heat make up water for boilers.
- Replaced inefficient single stage steam absorption chillers with highly efficient centrifugal electric chillers with up to 0.55kW/ton efficiency.
- Installed vend-mizer a motion sensing lighting and energy control technology for vending machines on all vending machines.
- Highly reflective roofing installed at the re-roofing and in new building construction.
- Replaced 3-way bypass valves on chilled water coils with 2-way valves on 90% of campus buildings to improve temperature differential between chilled water supply and return, thereby improving energy efficiency of the central chiller plant.
- Installed building control automation for centralized monitoring and efficiency improvement using newly created specialized team of building control technicians.
- Installed energy metering on most buildings with remote reading and data gathering, also standardized for new buildings.

D. Transportation Subcommittee Report

During this first year, the Transportation Subcommittee was formed to represent interested students, staff and faculty from several multi-disciplinary academic departments and administrative units. Participation is open to anyone interested. Participants currently include representatives from the College of Public Health, Department of Environmental and Occupational Health; the College of Engineering, Department of Civil & Environmental Engineering, the Clean Energy Research Center, the Center for Urban Transportation Research and the Student Chapter of the Institute of Transportation Engineers; the College of Arts and Sciences, Department of

Geography; the USF School of Architecture and Design; USF Parking and Transportation Services and USF Facilities Planning and Construction. The Transportation Subcommittee is co-chaired by the Director of USF Parking and Transportation Services and a Senior Research Associate with the USF Center for Urban Transportation Research (CUTR).

The Transportation Subcommittee met in July 2008 to go over the charge of the subcommittee and discuss the requirements and opportunities of the Climate Commitment. The Subcommittee met a second time in November 2008 to brainstorm various potential programmatic responses to reduce greenhouse gas emissions from transportation. Subcommittee representatives participated in regularly scheduled meetings of the Sustainability Steering Committee and other meetings, including a design charrette for our host city, the City of Tampa; a coordination meeting with the Energy Subcommittee, and initial planning meetings for the 4th Annual Campus and Community Sustainability Conference and Going Green EXPO 2009 to be held in October 2009. Transportation Subcommittee representatives also participated in and gave presentations at the 3rd Annual Campus and Community Sustainability Conference at the University of Central Florida in Orlando in October 2008; and at the annual Florida Commuter Choice Summit, in St. Petersburg, in December 2008, which is a consortium of Florida professionals in the public transit and transportation demand management profession.

The Transportation Subcommittee focused its efforts during the Spring, 2009 to provide the data needed for the greenhouse gas emissions inventory from transportation sources and to research what other universities are doing to reduce GHG emissions from transportation. Several other closely related efforts are underway by efforts of Transportation Subcommittee members. USF is a primary supporting member of a transportation management association, the New North Transportation Alliance (NNTA) Commuter Assistance Program. NNTA is a public-private partnership with a service area ("New North") in which the USF Tampa Campus is centrally located. NNTA members jointly identify and address transportation issues, with a focus upon the application of transportation demand management strategies. For Fiscal Years 2008/09 and 2009/10, USF has pledged cost shares to NNTA to match grants from the Florida Department of Transportation to operate the NNTA Commuter Assistance Program. The cost share includes fees to support the UPASS program, which subsidizes free public transit passes to USF students. NNTA promotes carpooling, vanpooling, use of HART public transit and the campus Bull Runner Shuttle, bicycling, walking, the free Emergency Ride Home Program and telecommuting. NNTA in coordination with USF, will launch the We Car carsharing program July 1, 2009 for students, staff, faculty and visitors of USF Tampa Campus.

A Transportation Subcommittee representative co-chaired the 4th Annual Tampa BayCycle in March 2008, to promote bicycle commuting. Tampa BayCycle was recognized by a regional newspaper, Creative Loafing as one of the "Green 100". Another representative serves as the Outreach Coordinator for a local program of the National Safe Routes to School. This past year, five public elementary schools in the New North service area participated and next year the program is growing to include

eight elementary schools and one middle school. A Transportation Subcommittee member is also working with the USF Asst. Director of Academic Initiatives for Housing and Residential Education to host a bicycle safety class in the Fall 2009 for dormitory residents, led by a League of American Bicyclists certified instructor. Through the NNTA, Transportation Subcommittee members held meetings, hosting representatives of Hillsborough Regional Transit Authority, the Hillsborough Metropolitan Planning Organization, the City of Tampa Mayor's Light Rail Initiative, Hillsborough County Growth Management and Development Department, and the Tampa Bay Regional Transit Authority, to discuss current planning efforts that will affect the USF Tampa Campus and for which USF has the opportunity to serve as a major participant. These include the development of a Multimodal Transportation District adjacent to the campus, the studies and plans for a proposed light rail line that would potentially pass along the west side of the campus, a proposed Bus Rapid Transit corridor that is planned to run along the north side of the campus, the MPO Long Range Transportation Plan 2035 Update, and the development of a Pedestrian Safety Action Plan, funded by Florida Department of Transportation, which is initially focusing upon an area directly west of the campus. USF is poised to play a role in these planning efforts that could improve alternative transportation options outside the campus and regionally, which will enable USF students, staff and faculty to leave their cars at home and ride transit, bicycle, walk to/from campus as well as use other modes that reduce the carbon footprint from Scope 3 commuter transportation. In the coming year, plans are underway to promote a social network based student ride matching program and work with USF Parking and Transportation Services to promote a priority parking and discounted carpool pass program. Transportation Subcommittee members also represent the implementation and future update of the USF Campus Master Plan by USF Facilities Planning and Construction. The many implementation efforts undertaken this past year include the construction of more on-campus housing to reduce the number of trips by students to and from campus, the placement of food and retail establishments on campus to reduce trips to/from campus, and the ongoing creation of bike lanes and sidewalks as new buildings are put in place and internal roadways are realigned to serve them.

E. USF Waste, Purchasing and Recycling Subcommittee

Developed the draft, "USF Sustainable Purchasing Information and Guidance" to support and encourage campus sustainability at USF and to provide guidelines, information, and resources in procuring products that will minimize negative impacts on society and the environment to the greatest extent practicable.

Food and Recycling

Here is a list of green initiatives implemented by USF Dining Services (Aramark)

- Tray-less dining – energy & water conservation through less water consumption = 32,992 gallons of water saved per academic year
- Recycle cardboard & tin materials at every dining location through Frito-Lay & Republic Waste Services
- Replaced all light bulbs with lower wattage bulbs & recycled bulbs through Frontier lighting = saves 1,689 kilowatt hours per academic year
- Defrosting of meats – thawing in refrigerator instead of running water conserves 9,600 gallons per academic year

- Green seal certified chemicals – creates less impact on the environment & is used for cleaning at every location
- Filtafry – recycling fryer grease, used for bio diesel to power automobiles
- Reusable recyclable cups for discounted fountain beverage purchases
- Reusable, recyclable, sustainable bags available at MSC Food Court & C-Store
- Fair Trade Certified Coffee – available at FFC, BDC, MSC Food Court, Coba Café, Einstein Bros Bagels, Health Science Café, Starbucks Coffee, Ben & Jerry's, & the Express Shop in Engineering
- Locally sourced food options – gives money back to the local economy (Flowers Baking Company, TG Lee Dairy, R.G.E. Distributing, & we receive produce from Fresh Point Produce, who support local growers)
- Natural & Organic groceries in C-Store
- Nutritional Information Kiosk located in Fresh Food Company – allows students to evaluate their options & choose foods that align with their dietary needs.
- Nutritional information on usfdining.com for daily menus, instead of printing on paper products
- USDA Organic Certified, Vegan & Vegetarian options at every location, every day (brochure available)
- Ben & Jerry's substitutions in paper & plastic products for more environmentally sounds choices by using paper napkins made from 100% unbleached, recycled content & making a switch to green-ware that uses a renewable corn-based resin.

Recycling of Traditional Materials

- Aluminum - Physical Plant is in the process of completing a waste audit (which we believe is a first for USF) with the help of some student volunteers. Data including volumes and revenue for paper and aluminum recycling has been compiled. Student assistants went through actual receipts from 1996 through the last fiscal year. It was determined that Physical Plant has recycled over 48 tons of aluminum and over 9700 tons of mixed paper. This is an important first step in developing a plan to expand recycling efforts. He will meet with Tampa Bay Recycling to discuss a private sector partnership. Physical Plant has started a new initiative to begin recycling plastics and glass (in addition to the Sycamore drive recycling center). 200 new recycling containers are now being distributed to academic and administrative Tampa campus buildings. These containers are labeled to accept aluminum, plastic, or glass. Another 200 containers are planned. The USF Student Environmental Association has been working on establishing aluminum can recycling in the residence halls are for almost a year. They have secured a private sector partner – Tampa Bay Recycling – to donate the bins. (SEA will cover the deposits.) (Source: USF Waste, Purchasing and Recycling Committee report, 11/08)
- Cardboard
- Glass
- Paper
- Plastics
- Light bulbs
- Yard waste

- Electronics

F. Greenhouse Gas Inventory

Here is the URL to the USF Greenhouse Gas Emissions Inventory prepared for ACUPCC. It was submitted in July, 2009. The start date for each year is not consistent across all types of information. Since this is the first inventory completed by USF, one of our findings included the need to make data collection across all sectors consistent by time period. In the report, the data that was available is what was reported, and this data is presented according to academic year, i.e., 2007-2008.

<http://www.acad.usf.edu/Office/Strategic-Initiatives/docs/USF-Greenhouse-Gas-Inventory.pdf>

G. The USF Campus sub-committee

Members represent the grounds, auxiliary services (including Chinsegut Hill), buildings and building maintenance, USF EcoArea, campus recreation, golf course and food services. We have not yet heard back from the SunDome.

We introduced the Initiative action plan to the committee members present and asked that all return to the next meeting with a list of questions/ideas about policies, actions, etc. for our group to research and assess. The committee had many questions pertaining to food service, recycling efforts, grounds and maintenance.

Preliminary findings:

Food Service:

Tom Williamson (Aramark @ USF) provided us with information that Aramark in Florida is compiling about sustainable practices on campuses. (attached)

The Claw (golf course):

Adam Combs (GM The Claw) provided us with the Billy Casper Golf (BCG) Green Program Environmental Resource Savings Checklist. (attached)

Building Maintenance:

Light bulbs are being changed to lower wattages to reduce energy consumption; auto turn off switches installed in most classrooms to turn lights off when unoccupied.

Aso...

- Several of our brands on campus carry Fair Trade products such as Java City, Starbucks, Einstein Bros. Bagels, and Ben & Jerry's.
- Dining Services recycles cardboard, light bulbs and grease.
- Dining Services no longer uses trays in order to reduce water use and energy.
- Yard waste is being pick-up by Republic, and the vendor separates materials. However, we are pending information as to were material is being recycled, if at all.
- 200 recycled cans for plastic and glass are on campus currently
- Paper is recycled
- Garbage "solids" are burned at Falkenburg facility to generate electricity
- Scrap metal is recycled

- Some food waste is being composted with USF Grounds department
- Sweet Water Organic Farm is partnering with USF
- Vending machines are using packaging from recycled products.

H. Previous and Ongoing Efforts throughout Campus

- USF and HARTLINE offer free bus service on the HARTLINE system for USF students and reduced fares of \$0.25 for faculty and staff.
- USF provides free mass transit on and near campus with its bio-diesel vehicles. To date, over 1 million have used this service.
- USF is currently conducting an inventory to measure the amount of greenhouse gases the university emits annually. This will be used as a baseline to measure reductions in coming years.
- USF has completed a high efficiency Green Lights program on all campuses and in all buildings. All new construction is required to follow this standard.
- USF has installed energy meters in each building for all utilities including electricity, gas, water, chilled water, and heating water to allow for monitoring and energy accounting, as well as for measuring success of energy management systems.
- USF is replacing traffic signals with high efficiency LED systems.
- USF has installed computerized irrigation systems with rain water sensing to optimize the use of irrigation water.
- USF collects its storm water and spent water from cooling towers in ponds. Some storm water is reused for landscape irrigation.
- USF students can grow vegetables in their own plots at USF's Botanical Gardens.
- USF re-roofing projects include increased roofing insulation and installation of a white cap with an SRI of 93 for high reflectivity and energy efficiency.
- USF has a photovoltaic solar system for charging some electric golf carts.
- USF has over five hundred 64-gallon containers that collect paper for recycling and has a community recycling site on Sycamore Drive.
- USF embraces the concepts of sustainable building and site design.
- USF has many courses, departments, student groups, and research projects that focus on environmental sustainability.
- USF is a member of the US Green Building Council, and green buildings seeking LEED-certification are under design or construction on the Tampa and St. Petersburg campuses.
- Residence Life of Housing and Residential Education has Salvation Army trucks come at the end of spring semester and park for move out days in two prominent places in the residence hall areas so that residents moving out can donate/contribute small appliances, small pieces of furniture and clothing to the Salvation Army. This initiative has been in effect 5 years. In addition, academic departments are buying used furniture, especially work stations.

I. Student Organizations

- **Emerging Green Builders (EGB) at USF**
EGB is a student organization that aims to create a mutually beneficial relationship among USF students, the Tampa Bay community, and local business leaders in the

area of green building and sustainability. The ultimate goal of EGB is to help USF and the Tampa Bay area to become preeminent leaders in the areas of green building, green improvements, and environmental and social sustainability.

<http://ctr.usf.edu/egb/>

- **Engineers for a Sustainable World**

The purpose of Engineers for a Sustainable World is to engage students, faculty, and professionals from all academic disciplines in reducing poverty by improving environmental, social and economic sustainability worldwide.

<http://www.eswusf.org/>

- **Engineers Without Borders (EWB):** "A non-profit humanitarian organization established to partner with developing communities worldwide in order to improve their quality of life. This partnership involves the implementation of sustainable engineering projects, while involving and training internationally responsible engineers and engineering students."

<http://www.ctr.usf.edu/ewb/>

- **USF Student Environmental Association (SEA):** SEA engages in volunteer activities, educates the community about the environment, and works toward making USF more environmentally-friendly. <http://www.ctr.usf.edu/sea/>

J. Student Involvement

- USF is starting a Sustainability Living Learning Community this fall with 24 students and an RA. The academic sponsor is Geography professor Bob Brinkman and Liz Kaplon, Assistant Director Academic Initiatives for Housing & Residential Education, is the Housing partner. This is new this fall and has not been done in the past but residents will become involved in green projects around campus. They will be able to meet and hear faculty discuss USF efforts and become engaged with programs in the Botanical Gardens as well as projects that might interest them in and around Maple B residence hall.
- Student orientations emphasize alternatives to bringing a car on campus. Transportation alternatives that are promoted include the Bull Runner Shuttle, HART regional public transit service, bicycling, and the new WeCar car sharing program
- In September 2008, the USF Sustainability Steering Committee applied for and was selected by the Sustainable Florida Collins Center for Public Policy to host the 4th Annual Campus and Community Sustainability Conference. It will be held on October 8-9, 2009 at the USF Marshall Center Student Union. Go to <http://www.sustainablefloridaconference.org/>

This conference gives individuals from campuses, government, businesses and communities a chance to come together to share their experiences and challenges related to creating sustainability and a green culture. Presentations will focus on matters relating to Florida's economy, environment, and quality of life. Please join us to explore successful projects and strategies relating to:

- Education and research for sustainability
- Economic improvements for sustainable efficiency and effectiveness
- Protection and restoration for sustainable ecological systems
- Enhancing sustainability for the well-being of all people

The conference is open to participants interested in sharing best practices for Florida's future, including

- Administrators, faculty and students of Florida's academic institutions
- Government officials and community leaders
- Planning, facility and development staff
- Florida citizens interested in developing stronger, local sustainability initiatives

In addition to this conference, beginning Friday afternoon through all day Saturday, October 9-10 will be held the Going Green Tampa Bay EXPO 2009. We held the first EXPO in April 2008 which was attended by 3000 people, so we decided to plan another one. The EXPO is free and open to the general public. Our partner is the Hillsborough County Planning Commission. Go to <http://www.goinggreentampabay.com/>

The EXPO will reach a wide audience and will:

- Showcase goods, services, information and ideas about renewable energy, energy efficiency, sustainable design, resource efficient development and green building
- Foster growth of local sustainable product lines and services
- Stimulate community-wide interest in sustainability, and jump start actions to avert climate change
- Highlight sustainability-related career opportunities

Organizers anticipate several thousand attendees at the **Getting Green by Going Green** EXPO, including students, business owners and members of the growing green community. The event is designed to focus on sustainability issues and opportunities that face the Tampa Bay region, showing the nation and the world that this is an advantageous place to grow a sustainable business or industry. This year the EXPO will feature formal exhibits inside the Marshall Student Center, an outside small business and student Marketplace along with solar exhibits and eco vehicles.

K. Sustainability Challenges/Competitions

ConservaBull initiated in Fall 2008

- 14 dormitory residence halls within Housing and Residential Education (over 2000 students) participated. Party for the hall with greatest decrease in energy consumption won free t-shirts to and a chance to win an IPOD.
- The goal was to Build awareness, change habits, and reduce energy consumption by 10% in participating halls.
- The savings ranged from 6% to 48% for the 14 dorm halls who participated, with an average around 25%.
- Zeta Hall reduced energy consumption by 48% over the average of previous 3 years during the period of competition. Another ConservaBull competition is scheduled for Fall 2009.

- <http://www.ctr.usf.edu/egb/conservabull/>

SUSTAIN-A-BULL Poster competition initiated in April 2008

- Held at the Going Green Tampa Bay EXPO and another is being planned for the EXPO 2009 in October.
- USF graduate and undergraduate students participated
- Monetary prizes for best poster in the undergraduate and graduate category
- Students and faculty to share their research related to sustainability with the broader community and enhance and encourage more sustainable practices throughout campus and beyond.

Lasting effects of competition is the development of a USF culture where research and education on sustainability related issues is publicly valued.

- www.goinggreentampabay.com

Members of the USF Sustainability Sub-Committees:

Mike Barnett, Business	Research
Sarah Baynard, Physical Plant	Water, Energy, Green Building
Bob Brinkmann, Geography	Climate Commitment, Greenhouse Gas Emissions, Campus
Hollie Chancey, Maintenance & Special Allocation	Campus Committee
Sarah Connelly, Provost's Office	Recycling, Waste management & Purchasing
George Cotter, Purchasing	Recycling, Waste management & Purchasing
Nainan Desai, Physical Plant Auxiliary Services	Procurement, Water, Energy, Green Building
Jacklyn DeVore, ESP Geography	Greenhouse Gas
Emissions	
Barbara S. Donerly, USF FPC	Green Building, Energy,
Transportation	
Delcie Durham, Mechanical Engineering	Energy, Research
Enrique Gonzalez, Civil Engineer (CUTR)	Transportation
Yogi Goswami, Chemical Engineering	Energy
Sharon Hanna-West, Business	Climate Commitment, Recycling, Waste management & Purchasing, Alumni & Outreach
Sara Hendricks, CUTR/Engineering	Transportation
Ed Hillsman, CUTR/Engineering	Energy & Transportation
Jennifer Isenbeck, Facilities Planning	Water, Energy & Green
Building	
Liz Kaplon, Housing & Residential Education	Campus
Mauel Lopez, PATS	Transportation
James R. Mihelcic, Civil & Environmental Engineering	Energy, Water
Mark Mistretta, CUTR/Engineering	Transportation
Toufic Moumne, Facilities Enhancement	Gas Inventory
Duncan Peabody, Civil & Environmental Engineering	Energy, Water
Siva Prakash, Physical Plant Division	Green Building, Recycling, Waste management & Purchasing, Campus
Leila B. Proctor, Facilities Planning	Green Building, Campus
Kingsley A. Reeves, Jr., IMSE/Engineering	Procurement, Water, Energy, Green
Stanley Russell, Architecture	Green Building
Martin Schonfeld, Philosophy	Curriculum
Kathy Simmons, Physical Plant	Procurement, Water, Energy, Green Building
Maya Trotz, Civil & Environmental Engineering	Students
Brian VanSant, Building & Maintenance	Water, Energy, Green
Building	

Laurie Walker, Botanical Garden/GPY/AS
Steven Worrell, Civil & Environmental Engineering
Daniel Yeh, Civil & Environmental Engineering

Campus
Energy, Water
Green Building, Water, Research

Appendix A

Transportation Subcommittee June 9, 2009

During this first year, the Transportation Subcommittee was formed to represent interested students, staff and faculty from several multi-disciplinary academic departments and administrative units. Participation is open to anyone interested. Participants currently include representatives from the College of Public Health, Department of Environmental and Occupational Health; the College of Engineering, Department of Civil & Environmental Engineering, the Clean Energy Research Center, the Center for Urban Transportation Research and the Student Chapter of the Institute of Transportation Engineers; the College of Arts and Sciences, Department of Geography; the USF School of Architecture and Design; USF Parking and Transportation Services and USF Facilities Planning and Construction. The Transportation Subcommittee is co-chaired by the Director of USF Parking and Transportation Services and a Senior Research Associate with the USF Center for Urban Transportation Research (CUTR).

The Transportation Subcommittee met in July 2008 to go over the charge of the subcommittee and discuss the requirements and opportunities of the Climate Commitment. The Subcommittee met a second time in November 2008 to brainstorm various potential programmatic responses to reduce greenhouse gas emissions from transportation. Subcommittee representatives participated in regularly scheduled meetings of the Sustainability Steering Committee and other meetings, including a design charrette for our host city, the City of Tampa; a coordination meeting with the Energy Subcommittee, and initial planning meetings for the 4th Annual Campus and Community Sustainability Conference and Going Green EXPO 2009 to be held in October 2009. Transportation Subcommittee representatives also participated in and gave presentations at the 3rd Annual Campus and Community Sustainability Conference at the University of Central Florida in Orlando in October 2008; and at the annual Florida Commuter Choice Summit, in St. Petersburg, in December 2008, which is a consortium of Florida professionals in the public transit and transportation demand management profession.

The Transportation Subcommittee focused its efforts during the Spring, 2009 to provide the data needed for the greenhouse gas emissions inventory from transportation sources and to research what other universities are doing to reduce GHG emissions

from transportation. Several other closely related efforts are underway by efforts of Transportation Subcommittee members. USF is a primary supporting member of a transportation management association, the New North Transportation Alliance (NNTA) Commuter Assistance Program. NNTA is a public-private partnership with a service area ("New North") in which the USF Tampa Campus is centrally located. NNTA members jointly identify and address transportation issues, with a focus upon the application of transportation demand management strategies. For Fiscal Years 2008/09 and 2009/10, USF has pledged cost shares to NNTA to match grants from the Florida Department of Transportation to operate the NNTA Commuter Assistance Program. The cost share includes fees to support the UPASS program, which subsidizes free public transit passes to USF students. NNTA promotes carpooling, vanpooling, use of HART public transit and the campus Bull Runner Shuttle, bicycling, walking, the free Emergency Ride Home Program and telecommuting. NNTA in coordination with USF, will launch the We Car carsharing program July 1, 2009 for students, staff, faculty and visitors of USF Tampa Campus.

A Transportation Subcommittee representative co-chaired the 4th Annual Tampa BayCycle in March 2008, to promote bicycle commuting. Tampa BayCycle was recognized by a regional newspaper, Creative Loafing as one of the "Green 100". Another representative serves as the Outreach Coordinator for a local program of the National Safe Routes to School. This past year, five public elementary schools in the New North service area participated and next year the program is growing to include eight elementary schools and one middle school. A Transportation Subcommittee member is also working with the USF Asst. Director of Academic Initiatives for Housing and Residential Education to host a bicycle safety class in the Fall 2009 for dormitory residents, led by a League of American Bicyclists certified instructor. Through the NNTA, Transportation Subcommittee members held meetings, hosting representatives of Hillsborough Regional Transit Authority, the Hillsborough Metropolitan Planning Organization, the City of Tampa Mayor's Light Rail Initiative, Hillsborough County Growth Management and Development Department, and the Tampa Bay Regional Transit Authority, to discuss current planning efforts that will affect the USF Tampa Campus and for which USF has the opportunity to serve as a major participant. These include the development of a Multimodal Transportation District adjacent to the campus, the studies and plans for a proposed light rail line that would potentially pass along the west side of the campus, a proposed Bus Rapid Transit corridor that is planned to run along the north side of the campus, the MPO Long Range Transportation Plan 2035 Update, and the development of a Pedestrian Safety Action Plan, funded by Florida Department of Transportation, which is initially focusing upon an area directly west of the campus. USF is poised to play a role in these planning efforts that could improve alternative transportation options outside the campus and regionally, which will enable USF students, staff and faculty to leave their cars at home and ride transit, bicycle, walk to/from campus as well as use other modes that reduce the carbon footprint from Scope 3 commuter transportation. In the coming year, plans are underway to promote a social network based student ride matching program and work with USF Parking and Transportation Services to promote a priority parking and discounted carpool pass program. Transportation Subcommittee members also represent the implementation and future update of the USF Campus Master Plan by USF Facilities Planning and

Construction. The many implementation efforts undertaken this past year include the construction of more on-campus housing to reduce the number of trips by students to and from campus, the placement of food and retail establishments on campus to reduce trips to/from campus, and the ongoing creation of bike lanes and sidewalks as new buildings are put in place and internal roadways are realigned to serve them.

This constitutes the End of Year Report of the Transportation Subcommittee. Any questions or comments regarding the content of this report can be directed to Sara Hendricks, Hendricks@ctr.usf.edu

Respectfully submitted,
Sara Hendricks and Manuel Lopez
Co-Chairs

Green Building Subcommittee June 9, 2009

The Green Building Subcommittee was formed to represent interested students, staff and faculty from several multi-disciplinary academic departments and administrative units. Participation is open to anyone interested. Participants currently include representatives from the USF student chapter of Emerging Green Builders (EGB); the USF School of Architecture + Community Design, the College of Engineering Department of Civil & Environmental Engineering; the USF Polytechnic campus; USF Physical Plant and USF Facilities Planning and Construction. The Green Building Subcommittee is co-chaired by the Assistant Director of Facilities Planning and Construction and an Assistant Professor with the University of South Florida School of Architecture + Community Design.

The Green Building Subcommittee began meeting in June 2008 to review the charge of the subcommittee and discuss the requirements and opportunities of the American College and University Presidents Climate Commitment to improve the sustainability of the campus and its impact on the region. The Subcommittee has continued to meet to brainstorm various potential programmatic responses to reduce greenhouse gas emissions from the issues and opportunities pertaining to campus planning and building design and construction. Subcommittee representatives participated in regularly

scheduled meetings of the Sustainability Steering Committee, the New North Transportation Alliance (NNTA), the Transportation Subcommittee, the Energy Subcommittee, Sustainable Tampa Bay, USGBC meetings, Eco-lution, and planning meetings for the 4th Annual Campus and Community Sustainability Conference and Going Green EXPO 2009 to be held at USF in October 2009.

Several Green Building Subcommittee representatives are LEED Accredited Professionals and have also given presentations at the 3rd Annual Campus and Community Sustainability Conference at the University of Central Florida in Orlando in October 2008; at the annual student-led EGB public Conversation on Green Building held at USF, and attended and spoken at numerous other conferences and symposiums. The committee members have been engaged in on-going sustainability efforts at USF and at the State level.

- Two of the student members led the very successful competition between residence halls to reduce energy consumption in the spring 2008 semester
- Four construction projects are currently in the process of design for LEED certification
- Two members teach sustainability and carbon neutrality at the graduate level in Architecture and Engineering
- Two members are staff mechanical engineers actively engaged in reducing campus infrastructure system energy consumption as well as in new and existing buildings.
- One member was asked to help rewrite the Board of Governors rules regarding the requirements for State University Campus Master Plans in order to ensure greater emphasis on sustainable practices in the planning of the Florida's public university campuses.

The Green Building Subcommittee has focused its efforts to develop a draft document that describes opportunities for USF to reduce Greenhouse Gas Emissions and contribute in positive ways toward carbon neutrality through improved campus planning and building design/construction practices. The document analyzes these opportunities in terms of Vision, Accomplishments, Opportunities, Barriers, and Action Plans.

The sections in the draft document include the following (in order to avoid extensive repetition, these are considered in addition to the practices spelled out in LEED guidelines):

Campus Planning:

- Site Planning
- Stormwater
- Transportation
- Recycling
- Landscape
- Irrigation

Building Design/Construction:

- General design
- Materials
- Energy Systems
- Water Conservation

Due to the nature of campus planning and building design/construction, some key elements overlap with other subcommittees and require further coordination as the committee continues its work.

This constitutes the End of Year Report of the Green Building Subcommittee. Any questions or comments regarding the content of this report can be directed to Barbara Donerly, bdonerly@admin.usf.edu

Respectfully submitted,
Barbara Donerly and Stanley Russell, Co-Chairs

Campus Subcommittee June 2009

Hollie Chancey, co-chair	Maintenance & Special Allocation
Laurie Walker, co-chair	Botanical Garden/GPY/AS
Nathan Wax	
Cathy Stedman	Campus Recreation Center
Abbie O'Hern Weeks	
Allison Werda	
Daryl Wagner	Auxiliary Services
Colleen Mulcahey	Human Resources
Bryan Van Sant	Physical Plant
Sarah Baynard	Physical Plant
Marc D. Felix	
Gordon Fox	Biology
Adam Combs	The Claw, USF Golf Course

The USF Campus sub-committee members represent the grounds, auxiliary services (including Chinsegut Hill), buildings and building maintenance, USF EcoArea, campus recreation, golf course and food services. We have not yet heard back from the SunDome.

We introduced the Initiative action plan to the committee members present and asked that all return to the next meeting with a list of questions/ideas about policies, actions, etc. for our group to research and assess. The committee had many questions pertaining to food service, recycling efforts, grounds and maintenance.

Preliminary findings:

Food Service:

Tom Williamson (Aramark @ USF) provided us with information that Aramark in Florida is compiling about sustainable practices on campuses.

The Claw (golf course):

Adam Combs (GM The Claw) provided us with the Billy Casper Golf (BCG) Green Program Environmental Resource Savings Checklist.

Building Maintenance:

Light bulbs are being changed to lower wattages to reduce energy consumption; auto turn off switches installed in most classrooms to turn lights off when unoccupied.

Did You Know?...

- Several of our brands on campus carry Fair Trade products such as Java City, Starbucks, Einstein Bros. Bagels, and Ben & Jerry's.
- Dining Services recycles cardboard, light bulbs and grease.
- Dining Services no longer uses trays in order to reduce water use and energy.

From 11/08 meeting:

- ✓ Yard waste is being pick-up by Republic, and the vendor separates materials. However, we are pending information as to were material is being recycled, if at all.
- ✓ 200 recycled cans for plastic and glass are on campus currently
- ✓ Paper is recycled
- ✓ Garbage “solids” are burned at Falkenburg facility to generate electricity
- ✓ Scrap metal is recycled
- ✓ Some food waste is being composted with USF Grounds department
- ✓ Sweet Water Organic Farm is partnering with USF
- ✓ Vending machines are using packaging from recycled products

USF Dining Services (Aramark)

Sustainability Snapshot Environmental Stewardship

- Tray-less dining – energy & water conservation through less water consumption = 32,992 gallons of water saved per academic year
- Recycle cardboard & tin materials at every dining location through Frito-Lay & Republic Waste Services
- Replaced all light bulbs with lower wattage bulbs & recycled bulbs through Frontier lighting = saves 1,689 kilowatt hours per academic year
- Defrosting of meats – thawing in refrigerator instead of running water conserves 9,600 gallons per academic year
- Green seal certified chemicals – creates less impact on the environment & is used for cleaning at every location
- Filtafry – recycling fryer grease, used for bio diesel to power automobiles
- Reusable recyclable cups for discounted fountain beverage purchases
- Reusable, recyclable, sustainable bags available at MSC Food Court & C-Store
- Fair Trade Certified Coffee – available at FFC, BDC, MSC Food Court, Coba Café, Einstein Bros Bagels, Health Science Café, Starbucks Coffee, Ben & Jerry's, & the Express Shop in Engineering
- Locally sourced food options – gives money back to the local economy (Flowers Baking Company, TG Lee Dairy, R.G.E. Distributing, & we receive produce from Fresh Point Produce, who support local growers)
- Natural & Organic groceries in C-Store
- Nutritional Information Kiosk located in Fresh Food Company – allows students to evaluate their options & choose foods that align with their dietary needs.
- Nutritional information on usfdining.com for daily menus, instead of printing on paper products
- USDA Organic Certified, Vegan & Vegetarian options at every location, every day (brochure available)
- Ben & Jerry's substitutions in paper & plastic products for more environmentally sounds choices by using paper napkins made from 100% unbleached, recycled content & making a switch to green-ware that uses a renewable corn-based resin.