



# CASE STUDY: UNIVERSITY OF FLORIDA, HOME OF THE GATORS

## CAMPUS FACTS

**LOCATION:**

Gainesville, Florida

**FOUNDED:**

1852

**TYPE:**

Public

**TOTAL STUDENT POPULATION:**

49,913 (32,776 undergraduates)

**STAFF:**

12,440

**PRIMARY ATHLETICS CONFERENCE:**

Southeastern (SEC)

**PRIMARY ATHLETICS DIVISION:**

NCAA Division 1

**NUMBER OF VARSITY TEAMS:**

19 (10 women's, 9 men's)

**NUMBER OF SPORTS FACILITIES:**

15 (11 athletic, 4 recreational)

**SUSTAINABILITY OFFICE FOUNDED:**

2006

**AASHE STARS RATING:**

Silver, 2011

**SPORTS GREENING WORK STARTED:**

2006

**SPORTS FACILITY LEED CERTIFICATIONS:**

Baseball Facility, LEED Certification for New Construction, 2007; Heavener Football Complex, LEED Platinum Certification for New Construction, 2009; Lacrosse and Soccer Facility, LEED Gold Certification for New Construction, 2009; Golf Course Clubhouse, LEED Silver Certification for New Construction, 2009; Southwest Recreation Center, LEED Gold Certification for New Construction, 2011; Gymnastics Training Facility, LEED Gold Certification for New Construction, 2013

## THE GATORS' GREENING STORY: MOTIVATIONS, CHALLENGES, AND LESSONS

The University of Florida Athletic Association is a national leader in green building practices. In 2009, the Gators' Heavener Football Complex became the first building in Florida and the first athletic facility in the country to be awarded Platinum certification. The Gators now have five LEED-certified athletics facilities, a LEED Gold-certified recreation center, and a "Neutral Gator" carbon offset program, underscoring the university's commitment to environmental stewardship.

## WHY IS UF GREENING SPORTS?

The university's president, Bernard Machen, is a founding signatory of the American College & University Presidents' Climate Commitment. In 2006 he pledged that the University of Florida would reduce its carbon emissions and help lead the nation toward a more sustainable future.

"When we conserve water, when we save electricity or produce it from renewable sources, when we burn calories instead of fossil fuels by biking to work, we help the environment. But we also gain independence," said Machen during his 2010 Earth Day address. "Strengthening our independence is one reason to pursue sustainability, but it is not the only one...Our goal is an environment of decency, quality, and mutual respect for all human beings and all other creatures." The University Athletic Association has played an important role in the campus-wide sustainability effort by taking a lead in green building design, carbon emission offsets, and waste diversion.

## WHERE DID UF START?

The UF Office of Sustainability, which was founded in 2006, helped establish the Gators' environmental outreach to sports fans that same year with the first Tailgator Green Team Recycling Program. This ongoing volunteer effort, which focuses on increasing recycling on campus before and after each home football game, has diverted more than 140 tons of recyclable material from the landfill since 2006.

This early collaboration between the sustainability office and the Athletics Association helped UF recognize the visible platform sports offers for educating a large audience. Their partnership has expanded beyond football game recycling to include annual "Green Games" during the lacrosse and softball seasons, promoting environmental education to a broader fan base.

**"STRENGTHENING OUR INDEPENDENCE IS ONE REASON TO PURSUE SUSTAINABILITY, BUT IT IS NOT THE ONLY ONE," SAYS THE UNIVERSITY'S PRESIDENT, BERNIE MACHEN. "OUR GOAL IS AN ENVIRONMENT OF DECENCY, QUALITY, AND MUTUAL RESPECT FOR ALL HUMAN BEINGS AND ALL OTHER CREATURES."**

## TIMELINE OF GATOR GREENING ACCOMPLISHMENTS

### 2006:

- The Office of Sustainability launches Tailgator Green Team Recycling Program to encourage recycling on campus before and after each home football game, in partnership with the Athletic Association.
- Volunteers collect recyclables and distribute bags to fans throughout game day, diverting more than a ton of recyclable containers each game.

### 2007:

- Baseball Locker Room Facility is awarded LEED Certification for New Construction.

### 2008:

- Earth Givers donates carbon offsets for home football season as part of the Athletic Association's newly established Neutral Gator initiative.

### 2009:

- James W. Heavener Football Complex is awarded LEED Platinum certification for New Construction, becoming first athletic facility in the nation to receive Platinum status.
- Lacrosse and Soccer Facility is awarded LEED Gold certification for New Construction. UF Golf Course Clubhouse earns LEED Silver certification for New Construction.
- The Athletic Association begins to purchase offsets through the Neutral Gator Initiative.

### 2011:

- Southwest Recreation Center awarded LEED Gold certification for New Construction.

### 2012:

- University Athletics Association begins funding programs for interns to collect and sort recyclables at Ben Hill Griffin Stadium during football games.

### 2013:

- Gymnastics Training Facility awarded LEED Gold certification for New Construction.



## HIGH-PERFORMANCE GREEN BUILDINGS

The Gators also kicked off their green building efforts in 2006 with the construction of their first LEED-certified athletic facility, the Baseball Locker Room, which houses locker rooms, offices, support staff rooms, audio-video rooms, showers, restrooms, and storage. The venue optimized energy efficiency to cut energy use by close to 25 percent below ASHRAE 90.1 standards. The Gators also cut indoor potable water use by 36 percent and outdoor landscaping water use by 50 percent, with no potable water used for landscaping. Of the materials used for construction, 71 percent were manufactured regionally.

The Locker Room's LEED certification gave momentum to the university's green building commitments. In 2001, the university had pledged to follow LEED criteria for all major new construction and renovation projects. In 2006, after the successful baseball facility construction, UF renewed its commitment to greener building by raising the bar to a minimum of LEED Silver certification for all new buildings. In 2009, in the wake of the LEED Platinum certification of the James W. Heavener Football Complex, UF raised the standard even higher to become the first university in the nation committed to a minimum of LEED Gold certification for all new construction.

"Although the University of Florida started adopting LEED in early 2000, and it is the home of the first LEED Gold and LEED Platinum buildings in the state of Florida, we continue to learn and try to raise the bar on each project," says Bahar Armaghani, assistant director of the university's Facilities, Planning, and Construction Division, which houses UF's Leadership in Energy and Environmental Design program. "Building green using LEED has become an important part of the operational and educational culture on our campus."

UF's athletics department's second LEED facility took U.S. sports venue construction to a new level by pioneering LEED Platinum certification for a sports complex. The football complex includes weight rooms, conditioning rooms, a nutrition center, offices, meeting rooms, recruiting rooms, a hall of fame, and a welcome center for Gator fans. It was constructed in 2008 and was initially designed to achieve LEED Silver certification, the university's standard at the time.

The UF facilities department and Office of Sustainability staff worked closely with athletic facilities staff, contractor PPI Construction Management, and architect RDG Planning and Design to make the new complex a reality. This interdepartmental collaboration, supported with funding from private donors, and the university's commitment to environmental stewardship helped the team exceed Silver specifications and attain LEED Platinum certification.



Photos courtesy of University of Florida.

"This is the first athletic facility project in our history that, from the planning stage, was to be funded 100 percent privately," says Phil Pharr, senior director of development for Gator Boosters, Inc. "In about a year and a half, we had 16 donors step up and commit the entire \$28.3 million. Not many schools in the country have the fan base that could pull that off. This is just one more example of what sets the University of Florida apart from most of our peers."<sup>1</sup>

The complex achieved Platinum certification by incorporating many green details (see "Heavener Football Complex LEED Platinum Features" sidebar). "The venue has occupancy sensors to control lighting, organic paint, and floors made out of recycled materials such as tires," says Carol Walker, assistant vice president of UF Facilities, Planning, and Construction. "Although the cost of construction was high, it will be balanced by lower operating costs, thanks to energy-efficient equipment that reduces heating and air conditioning costs." After 18 months of construction, the facility opened in mid-July 2008 in time to showcase its state-of-the-art design during the 2008 football season.

The football complex demonstrates the commitment of students, faculty, administration, and staff from many departments at UF to preserving the environment, says Armaghani. "Green buildings are not exclusively concerned with saving money through more efficient technology," she explains. "They are also investments for the well-being of people and the environment. Since we spend over 90 percent of our time indoors, we need to provide a healthy indoor environment for people. It's a great achievement for the Gators, making them number one in this area, too."<sup>3</sup>

In 2009 the University Athletic Association was awarded LEED Gold certification for its new lacrosse and soccer facility and LEED Silver for its renovated Golf Course Clubhouse. As with the football complex, the lacrosse and soccer center exceeded university standards at the time and helped provide momentum for raising the campus-wide commitment to LEED Gold.

The Southwest Recreation Center, the most popular recreation facility of the four main recreation facilities on the UF campus, was awarded LEED Gold certification in 2011 (see "Southwest Recreation Center LEED Gold Features" sidebar). The 40,745-square-foot recreation center was renovated and expanded to accommodate growing demand for intramural sports, personal training, and other athletic uses. "This facility is a modern laboratory for sustainable design and for teaching environmental awareness on campus," says Armaghani. "Students, faculty, and staff visit the center over 744,436 times per year."

The \$16.3 million building addition, funded entirely by a Capital Improvement Trust Fund fee levied on students, offers a jogging track, cardio equipment, fitness classes, strength training, and massage therapy. The building came in \$720,000 below budget, and those savings went toward further improvement and renovation of the UF weight room and basketball courts. "For this project we pushed the envelope for a LEED Platinum building. The project was designed and constructed to be Platinum," says Armaghani. "When it was submitted for review and the energy model was audited, it did not perform as well as expected and earned LEED Gold." The UF team reviewed the energy modeling process in order to improve future performance.

Student involvement was a key part of the project. The design process, which began in 2008, included students, staff, and faculty who worked to develop a shared vision. "Everyone had input into what the building would become," explains Armaghani. "In addition, the Southwest Recreation Center administration and student government conducted a survey of the student body to understand their needs. During construction," she continues, "students worked on the project to understand the LEED credits associated with construction and to understand the contractor's role in building to LEED specifications."

## HEAVENER FOOTBALL COMPLEX LEED PLATINUM FEATURES

### WATER EFFICIENCY

- Dual-flush toilets and other low-flow plumbing fixtures reduce water use by 40 percent.
- Native plants and efficient irrigation system decrease water demand by 50 percent.
- 100 percent reclaimed water is used for irrigation.
- 100 percent of wastewater is treated on-site (at campus wastewater treatment plant).

### ENERGY EFFICIENCY

- Energy use was reduced by 25 percent.
- Facility uses building-wide energy management system (EMS) and HVAC scheduling for night, holiday, and weekend setback.
- Occupancy sensors improve lighting efficiency.
- "Demand controlled ventilation" strategy adjusts the use of fan and pump systems in response to environmental conditions.

### MATERIALS

- 75 percent of existing building shell was reused.
- 78 percent of construction and demolition debris waste was diverted from landfill.
- Weight room flooring is composed of 86 percent recycled rubber from used tires.
- 36 percent of the material used on the project was locally sourced.

### SITES AND INNOVATION

- Green-e certified power is used for 70 percent of the building's electrical load.
- White reflective roofing material helps reduce heat island effect.
- Highly reflective paving material reduces heat island effect.



Photos courtesy of University of Florida.



## SOUTHWEST RECREATION CENTER LEED GOLD FEATURES

### WATER EFFICIENCY

- Waterless urinals, dual-flush toilets, and sensed faucets reduce water use by 43 percent (each urinal alone saves 40,000 gallons annually).
- 100 percent native plants reduce water use by 90 percent.
- 100 percent reclaimed water is used for irrigation.

### ENERGY EFFICIENCY

- The building uses 30 percent less energy compared with a typical building of similar size and function.
- Exterior lighting is 100 percent LED, including lights for artwork and walkways.
- Building automation systems provide fresh air delivery, temperature and humidity control, and building scheduling control.
- Advanced metering monitors heating, cooling, lighting, and general building loads to ensure energy efficiency.
- All televisions are energy-efficient LCD TVs.

### MATERIALS

- 35 percent of building materials included recycled content.
- More than 25 percent of materials were bought within 500 miles to support local businesses and reduce emissions.
- 53 percent of the wood used in the project was certified by the Forest Stewardship Council.
- 78 percent of construction waste was diverted from landfill.
- Flooring is about 30 percent recycled rubber.
- All reinforcing steel, about 58.7 tons, was made with 99 percent recycled content.
- All structural steel, about 168 tons, was made from 77 percent recycled content.

### SUSTAINABLE SITES

- 100 percent high-albedo material was used for all sidewalks.
- Number of bike racks was increased by 200 percent.
- EnergyStar reflective roof reduces energy needs.

### INDOOR ENVIRONMENTAL QUALITY

- MREV 13 filter removes 98 percent of pollutants from air entering the building.
- All interior material (including paint, sealant, adhesive, carpet, and composite wood) has no or very low VOCs (volatile organic compounds).
- Furniture has no VOCs and includes recycled content.
- Natural light and views are abundant throughout building.
- Smoking is prohibited (UF became a no-smoking campus on July 1, 2010).

Photo courtesy of University of Florida.



### NEUTRAL GATOR INITIATIVE

In 2007 the Gators began working to support the university's pledge to reduce its carbon footprint. During the fall of that year the Athletic Association offset carbon emissions associated with a football game against Florida State, the school's long-time rival. To accomplish this, campus scientists calculated the scope 1 and 2 carbon impacts associated with the game, and the Gators then purchased certified carbon credits to offset these carbon emissions.

The UF Athletic Association's efforts to mitigate its carbon footprint inspired Jacob Cravey, an avid Gator fan, to found an environmental nonprofit organization, Earth Givers Inc., with the goal of creating local carbon-offset community development projects. Earth Givers' initiative "We Are Neutral" provides carbon offsets produced by local initiatives such as low-income energy retrofits. These projects are implemented by community volunteers and are offered free of charge to the neediest residents of Gainesville, where UF is located. "The University of Florida has embraced a unique model for creating carbon offsets that focuses on community building by creating economic opportunities for those in need and providing education on sustainable practices," says Cravey.

The UF Athletic Association partnered with We Are Neutral to create "Neutral Gator," a program created to help reduce the carbon footprint of Gator athletics via a local offsets program. It also helps raise awareness across the Gator community about the importance of mitigating climate change with carbon emissions abatement. Over time, the program has grown to encompass all of the Gator Athletic Association's environmental outreach and it is now the predominant brand for sports greening at UF. Athletic Director Jeremy Foley explains that the highly visible program sends an important message about sustainability. "It's just the right thing to do," he says.

The program rests on the partnership, established early, among the UF Office of Sustainability, the University Athletic Association, We Are Neutral, and the International Marketing Group (IMG). "Each partner provided valuable insight into the workings of the Gator athletics program that made it possible to create a vibrant initiative—reaching thousands of fans on game days—which also makes a difference in the lives of individuals in Gainesville throughout the year," explains Cravey.

The Athletic Association has also continued to improve its waste management practices, as part of the university's commitment to "zero waste." For example, the Gators worked with the stadium concessionaire to acquire recyclable and compostable packaging, and to pair all stadium garbage cans with recycling bins. The team also developed marketing materials with the tagline "Put it in the right can, Gator fan" to educate fans about the waste diversion effort.

### CHALLENGES: OVERCOME AND ONGOING

"The main challenges [of Neutral Gator] have been communication and implementation," says Cravey. "We have to teach people what carbon offsets are, what a carbon footprint is, and why it's important. Then we need to get them to undertake carbon-reducing actions." The continued success of greening Gator athletics depends on using established relationships to spread knowledge of environmental issues and support for this work.

In an effort to seek out new strategies to involve and educate students, Neutral Gator has partnered with the Office of Sustainability's Gator Green Team to encourage fan engagement during UF's pregame FanFest. At the Sustainability/Neutral Gator tent(s) in the tailgating area on game days, fans can play environmentally themed games, get tips for reducing their environmental footprint, and learn about the Neutral Gator offset program. The stadium also features a Neutral Gator table and in-game JumboTron video announcements to help promote the Gators' environmental initiatives and get fans involved.

Another ongoing challenge for the Athletic Association, and the university as a whole, is continuing to reduce waste sent to landfill, particularly organic waste. Athletics has joined the university in negotiations in hopes of finding a campus waste contractor who can offer a commercial composting solution.

## LESSONS FROM THE FIELD

### INTEGRATE STUDENTS IN GREEN BUILDING PROJECTS

Students represent the majority of campus building users. Integrating student input into the design process can help improve building performance and better address users' needs. "Through student survey results, user requests were integrated into the design of the Southwest Recreation Center," says Armaghani. "Involving students in the design, construction, and operation of a LEED building was so rewarding we are using it on other projects."

### GIVE STUDENTS HANDS-ON GREENING EXPERIENCE

Neutral Gator strives to give students an opportunity to participate in activities that benefit the local community as well as the environment, such as monthly tree plantings and low-income housing retrofits. "The dedicated staff, volunteers, and interns are expected to lead by example, creating awareness and building the relationships that make what they love to do a possibility," says Cravey.

### ESTABLISH PARTNERSHIPS ON AND OFF CAMPUS

"From an operational perspective, the key for Neutral Gator has been to create meaningful partnerships within the community and within the various offices of the university," says Cravey. "By supporting We Are Neutral's Neutral Gator initiative, UF is also supporting partnerships off campus that make local carbon offsets possible. These partnerships include Alachua Conservation Trust, Gainesville Regional Utilities, low-income property managers, CH2M HILL, Alachua County government, the city of Gainesville, and countless business and civic groups."

### TALK ABOUT WHAT YOU'RE PROUD OF

Action and storytelling are essential for brand enhancement. "UF, Gator Athletics, and Neutral Gator are proud to see a project of this size through," Cravey says. "They are proud of the program's presence in the community and the meaningful impact of the brand within the university communities that they work in. They are proud of how the program has been able to link carbon offset activities directly to community development," he adds. "From a marketing standpoint, the goal has always been to strengthen the brand of the University of Florida as a leader in athletics, sustainability, and community involvement."

### TRANSFER SPORTS GREENING SUCCESSSES TO OTHER CAMPUS DEPARTMENTS

Thanks to the success of the Athletic Association's greening program, the Neutral Gator initiative has expanded to incorporate more UF department programs, including UF Housing's laundry operations and all commencement ceremonies (as well as other campus-wide events).

### DON'T EXPECT CHANGE OVERNIGHT

"Through the Neutral Gator initiative, the partners have learned the importance of recognizing that existing systems, mental models, and infrastructure don't change overnight," says Cravey. "It takes dedication and passion to shift any culture or behavioral patterns."

- 1 "James W. 'Bill' Heavener Football Complex," Florida Gatorzone website, [www.gatorzone.com/facilities/?venue=gateway](http://www.gatorzone.com/facilities/?venue=gateway).
- 2 Sara Watson, "University of Florida Football Complex Draws Praise for Sustainable Design," EWRI Currents, Spring 2009, [www.asoe.org/ewri/UFSustainability.html](http://www.asoe.org/ewri/UFSustainability.html).
- 3 Ibid.

## NEUTRAL GATOR GREENING ACCOMPLISHMENTS

Since 2008 the Neutral Gator Athletic Initiative has:

- Provided low-income energy retrofits free of charge to 250 families.
- Installed or exchanged 63,000 CFLs (compact fluorescent light bulbs) in the Gainesville, FL community.
- Created over 3.5 million dollars in utility savings for low-income families.
- Offset over 10,000 tons of carbon.
- Planted over 18,000 native longleaf pines on local conservation lands.



Photos courtesy of University of Florida.

