

83301 students

212420 pounds of CO₂ sequestered by trees

81424 solar panels

1276315 riders on campus shuttles

2355 tons of waste diverted from landfills

42 LEED-certified buildings

24.1 MWdc of solar power

4 campuses

1 goal

Sustainability

Sustainability Operations

Arizona State University

Annual Review 2014



Sustainability Operations at ASU

As an institution of higher education that thrives on finding solutions to global challenges, **Arizona State University** has focused on sustainability as one of its core values.

The university is a sustainability operations and practices leader among its peers across the country and continues to find innovative ways to remain a living laboratory—one at the cutting edge of impact and higher education.

In 2014, ASU advanced its sustainability commitment. The university took measurable steps to reduce consumption, maximize efficiency and rethink products and processes by focusing on four key areas: **climate neutrality, zero solid and water waste, active engagement, and principled practice.**

This annual review is an important documentation of ASU's continued efforts over the last year to meet its overall corporate sustainability practice goals and to be accountable to its stakeholders.

ASU's efforts to become more sustainable also were recognized nationally through various awards and recognition programs, including:

- ASU is one of only 72 colleges and universities nationally to receive the Association for Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking, Assessment & Rating System™ (STARS) Gold rating.
- ASU is a Cool School in Sierra Magazine's annual ranking of the nation's greenest colleges for the seventh consecutive year.
- The university figures prominently in The Princeton Review's Guide to 332 Green Colleges, released in April.

Between 2007-2014, Arizona State University has:

- increased gross square feet 24.3 percent to 20,789,806
 - reduced greenhouse gas emissions 18.5 percent to 302,790 metric tons
 - increased total student enrollment* 29.4 percent to 83,301
 - reduced per-square-foot greenhouse gas emissions by 34.4 percent.

**ASU unduplicated total*

42

 LEED-certified buildings comprising 3,740,114 GSF

The U.S. Green Building Council awarded ASU five LEED certifications:

- **Platinum:** Health Service Building, Tempe campus
- **Gold:** Sun Devil Fitness Complex, Polytechnic campus
- **Gold:** Sun Devil Fitness Complex, Tempe campus
- **Gold:** W.P. Carey School of Business' McCord Hall, Tempe campus
- **Silver:** Citrus Dining Pavilion, Polytechnic campus



McCord Hall LEED-Gold Certified

Climate Neutrality

ASU is committed to becoming a climate-neutral institution by 2025 in relation to greenhouse gas emissions from building energy sources, and completely climate neutral, including elimination of emissions related to travel and other sources, by 2035.

- As of Dec. 31, **solar photovoltaic and thermal production capacity** is 24.1 MWdc, which is nearly 50 percent of the university's daytime peak load. The estimated annual electricity production of 42,826 MWh avoids 23,267 MT CO₂e (metric tons of carbon dioxide equivalent) per year and reduces ASU's carbon footprint by 7.5 percent.
- **Solar photovoltaic shaded parking canopies** totaling 1,039 kWdc were completed in August over Parking Lot 55 at University Center at the Tempe campus, bringing ASU's total covered parking spaces to 5,918.
- The **U.S. Green Building Council** awarded ASU five LEED certifications: Tempe campus: Health Service Building (Platinum), Sun Devil Fitness Complex (Gold), W.P. Carey School of Business' McCord Hall (Gold); Polytechnic campus: Sun Devil Fitness Complex (Gold), Citrus Dining Pavilion (Silver).
- The **Sustainability Initiatives Revolving Fund (SIRF)** has provided \$5.6 million in investments since FY 2010 for ASU energy conservation projects that deliver a real return. The 2014 return on investment was \$990,193.
- **ASU Parking and Transit Services** sold 6,134 Student U-Passes and 841 Employee Platinum Passes. The passes are sold at a subsidized rate and provide students and employees a cost-effective, sustainable and convenient travel option.
- The **ASU-Zipcar** agreement provides 25 short-term rental vehicles to 6,832 members across all four campuses. To boost ride sharing, Parking and Transit Services issued 325 carpool parking permits.
- As of Dec. 31, ridership on **ASU Parking and Transit Services'** free shuttle service for all four ASU campuses increased to 1,276,315 riders.

Zero Waste

ASU has committed to zero solid waste by 2015 and zero water waste by 2020.

- **ASU** achieved a 26.5 percent waste diversion rate, which is nearly 2,355 tons of waste from all four campuses, including athletics and outlying properties.
- **ASU's grounds crew** harvested 2,500 pounds of dates from date palms on ASU campuses for sale and consumption.
- The **Clinton Global Initiative University** conference held March 21 and 22 achieved an average waste diversion rate of 96.9 percent. CGIU at ASU was the first time any university attempted to make the conference a zero waste event.
- **SIRF** provided funds for the installation of 11 water fountain/bottle refill stations with the potential to eliminate between 4,000 and 40,000 bottles per year, per station, depending upon station location.
- **ASU Recycling** and **Aramark** expanded back-of-house composting into all Tempe campus dining halls, including the Memorial Union, in July. In the following three months, nearly 30 tons of waste were diverted from the landfill. Diverting compostable waste will support efforts to move these facilities towards becoming zero waste.
- Throughout 2014, **Sun Devil Athletics** implemented a zero waste model (compost and recycling collection only) in all facilities. Highlights include a diversion rate of 87.4 percent in a men's basketball game against the University of Arizona and a diversion rate of 72.8 percent in the football game opener versus Weber State University. The average diversion rate for the football season was nearly 49 percent.
- The **Family Weekend Tailgate BBQ** on Oct. 18 achieved a 90.6 percent diversion rate, making this the fourth consecutive year the event has achieved zero waste.
- **ASU Recycling**, in partnership with **Residence Life** and Swift Charities for Children, expanded the end-of-year Ditch the Dumpster residence hall move-out collections to include new partners Goodwill Industries and Student United Way. Together, more than 25 tons of food, clothing, furniture and other reusable items were diverted into local communities during the month-long collection drive.
- **ASU Recycling** diverted 1,240 pounds of polystyrene, which is enough to fill an average one-bedroom apartment.
- **ASU Surplus Property** diverted 7,700 pounds of rigid plastics in 2014.



96.9 percent average waste diversion rate achieved during the Clinton Global Initiative University event



2500 pounds of edible dates were harvested from more than 200 date palms of 51 different cultivars on ASU campuses

Active Engagement

- **The Farmers Market @ the ASU Tempe** campus produced gross sales of \$103,000 for vendors and farmers in fiscal year 2014. Healthy eating and sustainability were promoted to more than 7,000 ASU community members.
- The **Polytechnic campus community garden's** 12 plots are used by nine students, two faculty members, three staff members and three classes from the ASU Polytechnic Preparatory Academy to grow their organic vegetables.
- ASU boasts many student organizations, including, the **Barrett Sustainability Club, Campus Student Sustainability Initiatives, the Green Devils, and the Farmers Market Student Ambassadors** to support sustainable activities.
- **Zero Waste Ambassadors** logged more than 1,500 hours of engagement educating students, faculty, staff and visitors about ASU's zero waste goals.
- ASU **Parking and Transit Services** supported various transportation sustainability festivals and activities across four ASU campuses to encourage alternative transportation use including ride-sharing, bicycling, walking and transit.
- The **Green Devils Network** was created to allow staff, faculty and administrators to promote a culture of sustainability at ASU. They actively support their department or work unit in meeting the university's sustainability goals.
- The inaugural **Sustainability Solutions Festival** engaged more than 8,400 people and featured a dynamic partnership among three sustainability pioneers: ASU, The Sustainability Consortium and the GreenBiz Group. Each group addressed the festival's theme, "It's time to find a better way."
- The **Resource Innovation and Solutions Network (RISN)** is a partnership between the **Rob and Melani Walton Sustainability Solutions Initiatives** at ASU and the city of Phoenix's Reimagine Phoenix program. Partner organizations include Ameresco, Mayo Clinic Health Systems of Arizona and Republic Services.

Principled Practice

- In their yearly personnel evaluations, all ASU employees are evaluated on their sustainability contribution efforts.
- ASU's bicycle program hired its first **Bicycle Program Manager** in February. In October, the League of American Bicyclists awarded ASU Gold Level Bicycle Friendly University status, putting ASU in the top 12 bicycle-friendly universities in the U.S.
- The **bicycle program** partnered with **ASU Wellness** to hold two League-Certified Instructor Seminars, which certified eight ASU students to teach a national bicycle safety course.
- As of Dec. 31, 3,022 ASU faculty, staff and students earned **Sustainability Literacy Education certificates**. The interactive, online program provides ASU staff and students examples of how they can support ASU's sustainability commitment. The program also includes facts to fulfill sustainability requirements on yearly personnel evaluations.
- **Grounds Services** reclaimed more than 1.7 million gallons of water from the Central Plant water capture project for power washing campus streets and malls. The Central Plant pumps the remaining water up to the cooling towers for the campus chillers. Since this project began in 2010, 9.5 million gallons of water has been reclaimed.
- Through the **Arboretum Tree Mapping** project, volunteers calculate sustainability metrics (carbon dioxide reduction, energy conservation and replacement value) to add to the ASU Campus Metabolism measurements. Phase I trees inventoried on the Tempe campus captured and sequestered 212,420 pounds of CO₂.
- All **Facilities Management** service units on the Tempe campus have achieved the highest "Master" level Green Shop certification.
- To encourage and promote sustainability practices within the institution, ASU President Michael M. Crow recognized these programs with the **President's Award for Sustainability**:
 - B99 Biodiesel Fueling Station Project
 - Green Labs Program
 - Salt River Project Waste Diversion Program
 - ASU Solarization Program.

Visit zerowaste.asu.edu, asusolar.asu.edu and cfo.asu.edu for more information.

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