Treading Lightly

Steps Toward Reducing Our Carbon Footprint

This is one section of The University of Arizona’s Climate Action Plan. You may also download the entire document.
Keep Waste Out of Landfills

- UA currently recycles 35 percent of all waste
- Goal is to increase 10 percent a year for the next 5 years
- 29 tons of students’ moving-out goods donated to nonprofits
- Composting 613,000 pounds of waste annually
- Diverting 42 tons of electronics from landfill annually
Keep Waste Out of Landfills

Students Initiate Many Recycling Projects

From construction pallets to animal bedding to banana peels, the University of Arizona is finding ways to chip away at its waste stream by implementing new and innovative recycling programs and – in the case of the banana peel – put waste to work.

Currently, the UA recycles 35 percent of all waste, up five percent from last year. The goal is to steadily increase the recycling rate for the entire university community by 10 percent each year for the next 5 years, further reducing the UA’s carbon footprint.

The Facilities Management recycling and waste department supports long-term UA sustainability goals by working to facilitate and increase recycling efforts across the campus. The staff provides information, education and resources to encourage faculty, staff, students, vendors and visitors to recycle common materials like cardboard, paper, aluminum and plastic, as well as everything from toner cartridges and batteries to shipping pallets and landscape waste.

The point of separating waste streams according to material type is to lower the contamination rate of recyclable materials from non-recyclable materials, which ensures more waste is actually recycled and the UA recoups a higher value of return. By working with a diverse array of local business, the university has created innovative waste-diversion streams to tackle uncommon materials.

Collaboration across campus is key for recycling at UA. Many recycling programs are initiated by students and then supported campus wide. Students for Sustainability has initiated numerous recycling projects, including Compost Cats – an innovative compost collection and production service that has students across campus noticing where they put those banana peels.

One undergraduate student is working to document the location of every recycling bin across campus, both in outside common areas and indoor spaces, then entering the data onto a GIS map. Once complete, this data can make recycling easier by more strategically placing bins according to demand, and by mapping all stations to facilitate access. That way, after polishing off a soda, a student could use a smart phone or laptop to check the UA website and locate the nearest recycling drop spot.

For more information, visit:
http://www.fm.arizona.edu/fm-dept/recyclewaste.html.
Recycling in Residence

Living for the first time away from home, students have the opportunity to form habits they’ll keep for life.

Roughly 6,000 students live on the UA campus, representing a significant slice of the university population – which means residence halls are in a unique position to help them foster lifelong habits in sustainability.

It begins with orientation, when students move into their dorms. Move-in and move-out days are especially heavy waste days, as students unload boxes and discard old hangers. University residence halls offer special programs to facilitate recycling and donation. On move-in days, there are corral areas set up outside each residence hall and graduate housing where students can deposit styrofoam packaging, cardboard boxes and other recyclable waste.

At the end of the school year, when many students don’t want to pack boxes anew, thousands of lamps, microwaves and bicycles are cast aside. To keep usable items out of the landfill, at the end of every semester the Residence Life Sustainability Program partners with Tucson community nonprofit organizations to set up collection bins where students can donate unwanted items. In 2011, about 29 tons of material – from storage bins to TVs and furniture – were donated to the Salvation Army and Community Food Bank of Tucson.

Though bicycles are a popular mode of transportation around campus, as students pack up and move out, many leave their bikes behind. Beginning in 2011, with a pilot program between the UA and local non-profit organization BICAS - which stands for Bicycle Inter-Community Art and Salvage - these discarded bicycles can find a second life. Through the group accepts donations all year, for several days in May, they set up a donation center on the UA campus where students can bring unwanted or unneeded bicycles.

Yet as any student knows, a lot happens between move-in and move-out. That’s why, throughout the year, residence life programs keep recycling at the forefront of student attention, where EcoReps in each dorm promote sustainability through more than 200 events and activities.

In February, UA students join “green” thumbs across the nation for RecycleMania, an annual two-month competition among universities to reduce waste and increase recycling. In 2011, the UA ranked 21st among 363 peer campuses in the United States, collecting more than half a million pounds of recyclables collected and kept out of landfills. In terms of greenhouse gas reductions, it is the equivalent of taking 25,000 cars off the road for an entire year.
Compost Cats Collect, Compost Food Waste

An apple core is discarded in the Student Union. A few months later a flower blooms in a nearby garden bed, nourished by compost.

University of Arizona’s Compost Cats are taking food waste from the Student Union, as well as local restaurants, and turning it into useable compost.

Monday through Friday, six part-time paid undergraduate students collect compostable food waste – like coffee grounds, fruit rinds and leftover bread – from Student Union Memorial Center and transport it to the compost site at the UA Agriculture Center. Students also collect compostable waste from 16 local businesses, including Whole Foods, Starbucks and the University Marriot, as well as clippings from campus landscaping projects.

Since January 2011, the Compost Cats have collected 414,000 pounds of green waste and 198,940 pounds of food waste. They gather up to 15,000 pounds of greenery and 7,000 pounds of food waste each week. Compost is used at the UA Community Garden, another student-initiated project, and donated to the local nonprofit Native Seeds SEARCH.

Not only does re-directing food waste from the landfill provide carbon offsets, which are currently being calculated by UA students, composting the food also saves business owners money in the form of landfill fees and reduced waste transportation costs.

The food and green waste takes three to four months to actually turn into compost. During that time it is carefully monitored to maintain stable pH, temperature and adequate moisture. When the compost is ready, it is shifted through a new mechanical compost screener, sorting mulch compost from fine-grain compost and providing the consistent texture required for commercial compost.

The ultimate goal of the Compost Cats is commercializing the project so that is financially self-sustaining. With a bagging machine requested from the UA Green Fund, organizers plan to begin selling bulk and retail compost – Wildcat branded, of course – within the year. While they currently don’t charge pick-up fees for any of the businesses they collect from, they are considering a monthly fee based on landfill fee savings and carbon emission credits.

Because composting requires more upstream separation than recycling, the Compost Cats also are working to educate students.

Collecting 414,000 pounds of landscape waste and 198,940 pounds of food waste since January 2011

Students plan to package and sell the compost – Wildcat branded of course

For three weeks in January, volunteer “compost coaches” stood by new composting bins in Student Union restaurants to educate students and others about what food they can and cannot put into the compost bins.

Photo by Samantha Munsey/Arizona Daily Wildcat
Pulling Our Cyber Weight

Computers, printers and other electronic devices contain hazardous elements like lead, cadmium and mercury. These toxins can leak into the ground when this e-waste is dumped in a landfill.

All items arestripped down to bare components and metals before they are loaded onto palettes and sent to a recycling plant in California. Once the material is recycled, the bookstore receives Certificates of Destruction stating that items were destroyed responsibly.

This program applies only to community e-waste, because of state regulations regarding the disposal of UA property. For the past five years, South Tucson Police Department, local school districts and other community organizations are able to recycle through the Cyberjunk collection program.

In 2011, the program responsibly disposed of 101 palettes of electronics, thus keeping 83,841 pounds of material – or 41.9 tons – out of the landfill.

Also in 2011, to diminish the amount of e-waste produced in the first place, the UA Bookstore launched an ink-cartridge refill program. Ink-O-Dem installed an ink-cartridge refilling system – making the UA the first university in Arizona to offer green, affordable ink refilling. Black cartridge refills cost $9.99 and color refills are $14.99.

That’s why the UA Bookstore and University Technology Services initiated a Cyberjunk Collection service. For four or five days every July, Cyberjunk sets up a collection center north of the bookstore, where students and community members can bring their old electronics and batteries to have them properly and safely recycled.
Green Spirit

The wildcat colors may be cardinal and navy, but University of Arizona students are leading the way to make school spirit green.

Greening the Game, a project initiated by Students for Sustainability and supported by Facilities Management and the Athletics Department, is helping to make recycling easier at UA sporting events.

After every home football game, project interns and volunteers spend an hour collecting water bottles and paper. Once the water bottles and pamphlets are collected in plastic bags, Waste Management picks up the bags and recycles them. After the Arizona State University game in the fall, 25 people collected approximately 1,050 water bottles.

- Greening the Game volunteers collect bottles and paper after every home football game.
- At ASU game, 25 people collected 1,050 water bottles.
Purchase “Green” Goods & Services

The University of Arizona is committed to stewardship of the environment and to reducing dependence on non-renewable energy. That’s why it buys green whenever feasible. Over the years many purchases were already eco-friendly and sustainable – but going forward green is a top priority for consideration along with price, availability and performance criteria.

Look for “Green Seal” cleaning products, efficient quiet “Green Label” vacuum cleaners, U.S. EPA ENERGY STAR electrical products, sustainably harvested wood certified by the Forest Stewardship Council and other industry-rated standards.

Vehicles that run on electricity biofuels or other alternatives to gasoline are preferred. Copiers and printers should be compatible with the use of recycled content and remanufactured products. Packaging is reusable, recyclable or compostable. Suppliers of everything from computers to carpets must have a take-back plan for reuse or environmentally safe recycling.

Heating, cooling, insulation and fire-suppression systems can no longer contain chlorofluorocarbon and halon. Paint, carpeting, adhesives, furniture and casework should have the highest recycled content and lowest amount of volatile organic compounds. Biodegradable, phosphate-free and citrus-based cleaning solvents are the norm. For road construction projects, recycled, reusable or reground materials are selected whenever practical.

The university supports purchasing goods and services from those manufacturers and vendors who share a commitment to the environment. From food wrappers and light bulbs to LEED-certified construction projects, UA purchasing policies are designed to do the most good for the resources expended.

The UA environmental purchasing strategy addresses these principles:

- Minimize consumption of non-replaceable natural resources
- Seek alternatives to products and processes that are detrimental to the environment
- Minimize waste from packaging and usage to eventual product disposal
- Maximize the reuse and recycling of materials.

Greening Bathrooms

With more than 1,000 restrooms on campus, the UA purchases only paper towels and toilet paper made from 80 percent recycled fibers. The UA also switched to a mild bio-degradable foam soap that meets sanitation standards and is green-certified. Hundreds of standard flushing urinals were replaced with waterless urinals, saving millions of gallons of water each year.
Reduce Purchase/Acquisition of Non-Recyclable Materials

- In addition to the new sustainability purchasing policy, the University of Arizona will provide resources for department-level purchasing that leads to less non-recyclable material being acquired by the UA.

Increase Diversion of Materials from Waste Stream

- The UA continues to expand its ability to divert from the waste stream by finding on- and off-campus uses for materials. By working with partners, the UA will continue to reduce what is thrown away by finding partners and markets for materials that the UA cannot recycle but are nonetheless valuable to others.

- The student-run Compost Cats program continues to identify waste streams at the university that can be incorporated into their process of creating ready-to-use compost at the UA Campus Agriculture Center a few miles north of the main campus. The UA will continue to support this effort as a critical strategy for reducing landfill greenhouse-gas emissions and for generating a valuable soil amendment for the UA and Tucson community.

- The university is investing in more and more effective recycling bins inside and outside of buildings that offer increased options for recycling.

- The UA is continuing to improve its recycling outreach strategy with enhanced signage, a mobile website and a phone app to ensure that UA students, employees and visitors can easily determine what can be recycled and where.

*This portion of this report currently undergoing peer review*
Learn more about our environmental initiatives,
visit http://portal.environment.arizona.edu.