



Reduce Dorm Waste via Dodge the Dumpster Programming

SUSTAINABILITY COMMITMENT(S) THIS INITIATIVE SUPPORTS

- **3 - Waste Reduction**
- **7 - Sustainability Literacy**

INITIATIVE ALIGNMENT WITH THE CHARGE

- **Build Community:** The campus move-in/move-out period is not only one of the busiest times on campus but also acts for many students and campus residents as their first major experience of interacting with the campus and for many Tucson community members as a major indicator of the impact of the university on the city. By taking clear steps to build sustainability into this important period, we will signal to campus residents, students, and the city that the University of Arizona is committed to pro-environmental change and to having a net positive impact on the city and the state.
- **Be Actionable:** To achieve concrete and transparent action on reducing campus waste, the University of Arizona requires clear, actionable, and consistent procedures for handling events such as campus move-in/out.

INITIATIVE DETAILS

Initiative Summary

This initiative proposes to address the significant waste generated during dorm move-in and move-out at the University of Arizona. These events generate substantial waste each year as students furnish their rooms resulting in packaging waste primarily consisting of soft plastics, Styrofoam, and cardboard. The goal is to reduce environmental impact by promoting recycling, reuse, and responsible waste management practices among students and staff involved in campus housing operations. Actionable items include:

- Develop and share a "green shopping list" for incoming residents, recommending sustainable purchases like LED lights and encouraging buying reused dorm items from thrift stores.
- Set up temporary cardboard collection points outside each dorm during move-in, ensuring cardboard is flattened and collected for recycling by custodial and University Facility Services staff.
- Increase educational opportunities for residents about waste reduction and recycling options throughout the school year, including orientation sessions and ongoing communications via Housing channels.
- Organize the Dodge the Dumpster program during move-out, where Suburban Miners collect and sort unwanted items from dorms for reuse, recycling, or resale.

- Assess the effectiveness of diversion programs like Dodge the Dumpster, aiming to increase diversion rates and potentially establish permanent donation collection points within dorms to ease logistics and increase participation.

Proposed Initiative & Background

Dorm Move-In generates massive amounts of waste every year. Students are outfitting their dorm rooms with electronics, appliances, decorations, and more. Most of those items come packaged in soft plastic wrapping, Styrofoam, and cardboard. For the first couple of weeks of school, student package numbers are also elevated. As a result of these two factors, students are generating packaging waste at a high rate. Housing must bring in special roll-off dumpsters to accommodate the amount of extra waste students create during this time.

Housing has implemented some programming to recycle cardboard during move-in. Housing sets up temporary cardboard corrals outside each dorm to collect flattened cardboard. Housing custodial staff work to ensure the cardboard is empty and flattened. University Facility Services staff remove the cardboard and take it to several cardboard-only roll-offs brought in specifically to handle the recycling load. In 2023, Housing recycled approximately 1.99 tons of cardboard during the first two weeks students lived on campus.

Dodge the Dumpster is a program to collect food, durable goods, and electronic waste when students move out of housing in May each year. During move-out from dorms, residents dispose of hundreds of thousands of pounds of remnants from dorm room life. Usable items like rugs, lamps, bedding, microwaves, fridges, lamps, clothes, storage containers, toiletries, food, and more are thrown away when students leave.

In response to this behavior, large roll-off dumpsters must be placed across campus to accommodate these items.

Housing's year-end waste diversion efforts began in 2009. For years, Housing partnered with various non-profits from across Tucson, such as Salvation Army, Goodwill, and Big Brothers, Big Sisters. The organizations removed unwanted items from dorm lobbies for free. In exchange, they kept whatever they collected for reuse or resale.

In 2016, supported by the University of Arizona Green Fund (now the Campus Sustainability Fund), the Office of Sustainability and Housing piloted an effort where students would staff the dumpsters where dorm residents were leaving items. The goal was maximum diversion. Dubbed "Dodge the Dumpster," this program ran in full force in 2017 and 2018.

However, many logistical challenges made this model untenable. Housing had difficulty hiring the necessary temporary staff. Students who signed up to work did not show up for their shifts (finals are a difficult time to rely on student workers when they have other, valid priorities). There was also not enough staff capacity to manage all of the moving parts, so staff were overworked and over-stressed. The student staff time it took to sort through the unwanted items once collected was massive. There were space concerns for storage, sorting, and reselling items. Finally, the profits from a Tucson-wide rummage sale did not come anywhere close to covering costs for the program. It was determined that

this program was not sustainable from a cost or staffing perspective given its limited resources, capacity, and costs.

Ultimately, that model of Dodge the Dumpster was abandoned. Housing partnered successfully with the Salvation Army for several years before COVID. However, due to changes in their operation (leaving Tucson), they no longer have the capacity to manage the university's end-of-year dorm waste needs. None of the other Tucson non-profits are interested in taking on the logistical challenges of coordinating pickups in exchange for the donated goods.

In 2022, Housing began partnering with Suburban Miners recycling company to manage the move-out waste. For a fee, Suburban Miners enter the dorms and remove discarded items. They then sort through the collections and resell, reuse, or recycle the items. In partnership with Suburban Miners, Housing is exploring the possibility of adding waste sorting stations at the various dumpsters for the last days of student move-out, when most students are leaving. This new format has not yet been determined for 2024.

The University of Arizona Surplus helped with collecting unwanted items in the Honors Village dorm for the past several years. However, Surplus did not get the kinds of donations they were hoping for in 2023 and asked that Suburban Miners take over Honors Village operations in addition to the rest of the operation across main campus in 2024.

Housing has successfully partnered with the University of Arizona Campus Pantry since 2017 to manage unwanted food during move-out. Members of their staff remove food students leave behind for use at the Pantry.

Suburban Miners also collect food in the buildings where Campus Pantry cannot service for logistical reasons.

Working with Suburban Miners to reuse and recycle as much as possible comes with a cost. It is less expensive for Housing to throw away the items than implement the diversion program. To maximize total waste diversion, additional efforts and costs are needed in the lead-up to dorm move-out as well as the event itself.

The Dodge the Dumpster program has shown it can be successful at diverting waste. Over the past two years, Housing diverted 60,000-70,000 pounds of material from the landfill during move-out. This translates to a 26-28% diversion rate. There are opportunities to alter the current model to increase diversion rates and potentially capture some of the unwanted items for reuse by future students.

Enhance and in some places develop and implement dorm programming around waste reduction, including education and collection opportunities before residents arrive, during move-in, throughout the school year, and during move-out. Increase educational opportunities and staffing to minimize durable goods and electronic waste created during dorm living.

Before Residents Arrive

- Develop inclusive messaging for incoming dorm residents about more sustainable choices for dorm living

- Revamp and share Housing’s “green shopping list” and suggest sustainable purchases like LED lights or sustainable linens
- Strive for a list that provides recommendations for items at different price points to reduce financial barriers to sustainable shopping
- Promote buying reused dorm items from thrift stores
 - Dishes, linens, decorations, storage solutions, etc.
 - Promote bringing fewer items
 - Communicate the idea that “hard goods aren’t disposable, only bring what you intend to take home.”
 - Share messaging with students through Housing’s communication channels
 - Share with students as part of their pre-move-in resources and again during first-year orientation
- Provide information to incoming residents about the university’s attempts to collect cardboard during move-in
 - Consider sending dorm maps with the cardboard location(s) noted
- Expand collaboration between Housing and the Office of Sustainability to promote sustainability engagement and recycling with marketing pieces placed directly in student rooms before their arrival

Move-In

- Expand cardboard recycling efforts during dorm move-in
 - Redesign materials and expand signage about cardboard recycling locations
 - Include both information about the recycling collections and directional signage
 - Continue to partner with Housing Custodial and University Facility Services to collect as much flattened cardboard as possible
- Prepare students for the transition from temporary cardboard collections during opening to using the permanent dorm collection locations during the second week of school
- Educate residents about the location of trash and recycling in their building
 - Beyond the typical signage, Resident Assistants (RAs) should address waste during their opening wing meetings. RAs will briefly tell students what they can recycle, address some of the university’s major contaminants, and walk students from their wings to the trash and recycling collection locations
 - Desk Assistants (DAs) can further reinforce this information as needed

During the School Year

- Increase the opportunities provided for on-campus residents to donate durable goods such as clothing, electronics, appliances, furniture, gently used dorm items, and school supplies
 - More frequent collections and mid-semester events that encourage residents to donate items before moving out
 - Housing should expand its current collaborations with local non-profits and student groups interested in hosting donation drives

- Expand collections from a once-a-year event to several permanent collection points within each dorm or district. These permanent collection points, determined by Housing and Residential Life and distributed across all of the dorm districts, will serve a number of purposes. These include improving accessibility and ease for students to donate items and goods, distributing the infrastructural load on our non-profit partners over a longer time frame, and increasing the amount of waste diverted from the landfill. This will require finding partnerships with organizations willing to come into the dorms regularly to remove the donated items
- Student Eco Reps could be tasked with promoting permanent donation locations and opportunities, as well as mid-semester and end-of-year collections.

Move-Out

- Provide standardized notices and trainings to all custodians, DAs, and RAs during the months and weeks leading up to move-out
 - Staff will be encouraged to share that information with students to bolster resident participation
 - All Housing staff will be initially informed about Dodge the Dumpster and other waste diversion efforts during summer training hosted by Housing's Sustainability program
- Expand promotional efforts around Dodge the Dumpster
 - Include information about donations during RA closing bulletin boards and wing meetings
 - Consider providing a small insert in all student mailboxes that includes information on Dodge the Dumpster and other relevant move-out information
 - Include digital signage and other digital marketing efforts
 - Promote on social media
- Continue to enhance partnership with Suburban Miners to collect unwanted hard and electronic goods from dorms during the last week and a half of the school year
 - Suburban Miners will set up temporary donation locations inside every building. Residents will be directed to put unwanted items in those locations for reuse or recycling. Suburban Miners will enter every dorm and remove donated items daily throughout move-out
 - Develop a funding mechanism to continue supporting Suburban Miners operations
- Consider expanding Dodge the Dumpster operations to include waste station collections to maximize diversion
 - 11 waste stations (one at each temporary roll-off dumpster) should be staffed Thursday from 9am-7pm and Friday from 8am-12pm at the end of move-out in May.
 - Creates a total of 33 four-to-five-hour shifts needing to be filled
 - Consider using previously hired Office of Sustainability or Eco Rep student employees as a workforce
 - Consider how various departments across campus might volunteer to help staff the waste stations

- Consider finding funding to pay Suburban Miners to manage waste stations (with this option, Suburban Miners would likely want to keep the items they collected at the waste station)
- Items collected at waste stations could be diverted for student use if a campus thrift store is developed or Surplus operations are expanded to serve students more directly
- Because waste stations would be located outside, there are fewer security concerns for Housing operations. Any students or staff members could work at those stations without needing background checks or other security measures necessary when entering the buildings

Incoming residents are often focused on bigger-picture concerns before they arrive in the dorms—securing a living space, finding a roommate, finding parking, registering for classes, etc. They might not be receptive or to pro-sustainability messaging before getting to campus.

It is confusing for students to have one method for waste disposal (trash and special cardboard locations) for the first two weeks of school and then have those locations change to permanent trash and recycling collections. Additional support for students during this transition is necessary to enable a smooth transition from one method to the other.

Waste stations proved logistically complicated during the initial run of Dodge the Dumpster in 2017 and 2018. Getting students to work at the end of finals week was difficult. Even students who signed up for shifts did not show up. Hiring temporary employees in Housing is not logistically feasible given their hiring protocols (i.e., a full background check for all Housing employees).

There is a 3-month gap between when students are abandoning items and when students who need those items are moving in. Sharing apps are not likely feasible due to that gap. Finding a place on campus to store tens of thousands of pounds of dorm essentials, and developing a mechanism for redistribution, could prove difficult without the development of an on-campus thrift store.

Data Analyses to Support Initiative

The average college student discards 640 pounds of waste annually (<https://www.planetaid.org/blog/curbing-the-college-waste-problem>) with the bulk of the waste generated in May when students move out of campus at the end of a school year (<https://www.scu.edu/sustainability/events/moveout/>).

In the Qualtrics survey conducted to provide input on the Action Plan, “Waste Reduction/Management” was one of the top three issues in terms of votes received from all respondents. It was particularly likely to be ranked as a top issue by student and staff respondents, in other words, members of the groups who are most likely to see and be impacted by waste on campus daily. Campus waste can be addressed in many ways but increasing sustainability through actions connected with move-in/out should be a priority. It is a straightforward way to transform an event that is a single major contributor to annual waste into one which signals the University of Arizona's commitment to sustainability and offers opportunities for re-use.

Resource Requirements & Return on Investment

Resource Requirements

- Tents and water for Housing custodial workers who are outside breaking down cardboard in August
- Costs for cardboard roll-offs and recycling during opening
- Suburban Miners waste disposal fees
- Waste station costs
- Suburban Miners' additional fee
- Bins for sorting or staff time to organize and manage waste stations
- Student employee wages
- Tents, water, snacks
- Bins for sorting
- Vehicles for transporting donated goods
- Storage location
- Costs for expanded marketing efforts
- Printing costs
- Staff time used to develop new marketing materials and campaigns

Return on Investment

- The university could save money on large hauling bins if this program is successful in diverting and reducing waste. If students purchase fewer items, there will be fewer items to throw away at the end of the academic year.

Potential Funding Sources

- Grants or donations for initial investment
- Surplus revenue from sold items
- Some initial investment will be needed but as the campus surplus store and services expand, this service should be included more to produce revenue and offset costs.
- To smooth costs over time, the necessary expenses could be budgeted as part of the normal expenses of Housing events (Move-In/Move-Out) and should be budgeted for as normal operations over time.

Accountable Division(s) & Department(s)

- Housing & Residential Life
- Office of Sustainability

Partners & Collaborators

- Students

- University Facility Services
- Suburban Miners
- Campus Pantry
- University of Arizona Surplus

Implementation

Length of Time to Implement

- Less than one year
- One to five years
- More than five years

Difficulty of Implementation

- Low
- Medium
- High
- Extremely High

Relative Timing

- Begin within two years
- Begin in three to five years
- Begin in six years or later

Metrics for Success

- Increase in the pounds of cardboard collected during move-in
- Decrease (in percentage) in the amount of recycling contamination found at the beginning of the semester (as measured by the Housing waste audit/CORE project)
- Increase in pounds of donations collected/waste diverted
- Reduction in pounds of waste in roll-off dumpsters during move-out.