

Earth Summit Progress Report

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Creating A Climate-Friendly Campus

- Housing has entered into a contract with Siemens, an energy services company, to perform an energy audit on almost three million square feet of its facilities. We are calling this the "Housing Improvement Project". The results of this audit will be reported as several cost-saving scenarios from which Housing will develop a final list of recommendations. The second aspect of the project will include the installation of the measures identified in the recommendations. This is a very appealing project that is expected to result in an overall energy savings of 15-30%.
- Energy improvements in Newton Court, a Family Housing area, include:
 - the installation of three smaller, more efficient, two-stage boilers. Rather than having one large boiler continually circulating hot water for domestic use during the summer (and when space heating is not needed), now a smaller boiler will provide space heating and domestic hot water with two stages when needed, and only summer domestic water with one stage.
 - High quality, energy-efficient Grundfos pumps are being installed that use about 10% less energy and have a longer life.
- At Newton Court and the College Inn, all porch lights were converted from incandescent to compact fluorescent bulbs.
- At Smiley Court, new light poles are using HID rather than incandescent lamps.
- Retired refrigerators for Family Housing units are being replaced with larger, more energy-efficient Whirlpool models.
- At Marine Court, a domestic hot water loop will be installed in the spring of 2003. This loop will provide hot water, and will allow for the steam line to be shut down during the summer months. This is estimated to save about 20% in steam costs.

- Apartment units at Athens Court are being retrofitted with individual zone controls to provide for more efficient heating.
- In Family Housing, low flow showerheads are being installed as units are vacated and as bathrooms are being remodeled.
- Housing has a contract with a vendor to remove the CFC's from all refrigerators that require disposal. The refrigerators and the reclaimed CFC's are then recycled.
- Housing, with assistance from the Campus Resource Conservation officer and the Environmental Center, posted over 12,000 stickers reminding residents and staff to "Turn Off the Juice When Not in Use". Stickers were posted in every student room, every Family Housing apartment, and in administrative offices, kitchens, and conference rooms.

Growing Without Increasing Traffic

- RHA is sponsoring a bike parking improvement plan in conjunction with Parking and Transportation Services, and the Environmental Center. This plan will provide for 766 improved, and 196 new, bike parking spaces at residence halls.

Creating a Safe and Healthy Campus

Part I: Minimizing Hazardous Waste

- All Housing-owned unwanted or malfunctioning computer equipment is inventoried through Housing IT. If it requires disposal, it is then sent to Property Services. In February '03, Property Services notified all departments that the sale of unwanted computer equipment through pallet auctioning would no longer be possible, and that there will be a per item fee to process all computer equipment. Housing will be looking into the feasibility of leasing computer equipment to see if we can approach cost-neutrality by avoiding disposal fees. We will also be asking Housing's Residence Hall Association (RHA) if they would be interested in surveying residents to determine if there is a need for a student computer disposal program.
- Housing is evaluating all cleaning products used in its six kitchens for acute or chronic toxicity. Hazardous products are currently being identified. More user- and environmentally-friendly substitutes will be tested by kitchen staff for their acceptability and suitable performance. These substitutes will then become the standard for all the kitchens, and for some applications in housekeeping.
- Housing is working with EH&S towards converting approximately eight remaining floor drain connections. Currently, these connections route to the storm sewer yet need to route to the sanitary sewer.
- Dining and Housekeeping staff have been informed of all stormwater regulations that prohibit all treated water from entering a stormsewer, i.e., they may no longer rinse off equipment at back docks or on any hardscape.
- All spent fluorescent lamps containing mercury are disposed of by Facilities Management through an EPA-approved lamp crusher, designed to capture the mercury vapor.

- All batteries generated by Housing Services—i.e., those from cell phones, palm pilots, hand-held tools and smoke detectors in Family Housing—are collected from the Housing Maintenance Service Center by EH&S for proper disposal.
- A new battery-free flashlight is being used in Housing Services. The user generates electrical energy by shaking the flashlight, which has a generator and capacitor to store the energy. It is expected to save approximately \$40 in batteries per year per flashlight, with a payback period of less than one year.

Creating a Safe and Healthy Campus

Part II: Minimizing Exposure to Toxic Chemical and Pesticides

- Housing is in the second year of a three year protocol of using a corn gluten meal pre-emergent control on weedy areas of turf, and a slow-release, alfalfa-based fertilizer. Cultural practices are also being modified so that grass is mown to a taller height, and watering is done at the most optimum time of day, as well as in the most optimum amounts (the feeling being Housing has been over-watering much of its grounds in prior years; clearly, the drought is going to have an impact on this aspect of the program). The objective is to reduce the spread of dandelions and other visible weeds in turf areas, and to build soil health so that the turf is more able to out-compete weeds.
- A vinegar and soap solution is being used on weeds in sidewalk and asphalt cracks with good success. Housing has not applied pesticides in over 10 years.

Greening Campus Consumption and Disposal Habits

Part I: Purchasing Environmentally-Responsible Products

- Housing is underway with its green building program. In the fall of 2002, Housing contracted with a green building consultant to identify opportunities to incorporate green building materials and methods in both major construction and smaller maintenance projects. Procurement procedures that currently act as barriers to using green products will be modified to support this activity. Training sessions to familiarize project managers and supervisors will be provided, and project management procedures will be modified to help make incorporating green measures a new Housing standard.
- Items typically stocked in Housing Services' warehouse such as paints, finishes, and adhesives will be evaluated for cost and performance against environmentally healthier alternatives. If this evaluation favors these alternatives, they will likely become standard stocked items.
- The maintenance supervisors for Family Housing are looking at making recycled content/recyclable carpeting the standard for replacement carpeting in all apartment units.

Greening Campus Consumption and Disposal Habits

Part II: Capping Solid Waste Going to the Landfill at Today's Levels

- Housing is investigating the possibility of a food compost project for handling pre-consumer food in all eight of Housing's kitchens. There is an estimated 600 tons of pre-consumer food waste that could be diverted from the landfill. With the support of the Environmental Center and an EPA grant, we are currently looking at partnering with a local recycler to compost the food waste off campus through either aerated windrows (long rows) or vermicomposting (using worms to accelerate the decomposition). If this project were to get the green light, Housing could increase its diversion rate from 15% to 42%.
- 610 pallets were reused/recycled by a pallet vendor; any broken ones are chipped up and used as mulch.
- In the Fall of '03, the Pay-for-Printing program will return to Housing's computer labs, saving an estimated 800 reams of paper annually.
- Housing has chipped its organic wastes since 2001, diverting an estimated 36 tons from the landfill, and using it as mulch.
- All scrap metal generated by Housing Services is recycled.

Water Conservation Efforts

- As part of Housing's performance contract with Siemens (mentioned in the "creating a Climate-Friendly Campus section), opportunities for water conservation will be identified. These opportunities may include conversions from city-treated water to ditchwater for irrigated areas, more efficient irrigation systems, low-flow showerheads, low-flow toilets, and contract specifications for water and energy efficient washing machines for laundry rooms.
- Outreach materials were provided last year, and will again be provided this year, to inform residents and guests of the drought and to encourage them to conserve water during showering and washing at sink areas. Signs were posted in unlandscaped areas to notify residents and guests that new plantings would not be established during the drought, and other signs alerted passers-by of areas being watered by ditchwater.
- The City of Boulder presented several training opportunities to Housing's ground staff so that they could better understand the reasons behind the drought, and the need for watering restrictions, as well as the restrictions themselves. Moisture monitoring tools were also distributed to grounds staff to assist them in applying the correct amount of water.