

SustainVU

Departmental Greening Guide

**Tips for reducing your environmental impact
around the office**

Sustainability is achieved when the needs of the present population are met without compromising the needs of the future. To achieve sustainability, we should examine the impact that our activities have on the environment and implement ways to reduce our consumption of resources and our generation of waste. In keeping with the efforts of Vanderbilt to become a more sustainable campus, the Sustainability and Environmental Management Office has developed this **Departmental Greening Guide** in order to provide administrators and others interested in greening their offices, departments, or schools with the tools they need to lessen the environmental impact of their day-to-day operations.

Reduce, Reuse, Recycle

The basis of environmental sustainability rests on the concept of Reduce, Reuse, Recycle, in that order. The first step in “greening” is to **REDUCE**. This means making a conscious effort to lessen your consumption of resources and products on a daily basis, whether this is using a reusable coffee mug instead of a disposable one or printing double-sided copies to save paper when emailing will not suffice. Reducing your consumption of resources also reduces the waste you produce.



Reducing waste means looking for products that you can easily **REUSE**, which is the second step. You might repurpose items yourself or you can look for places to donate unwanted products so others can reuse them.

To close the waste loop, you should attempt to **RECYCLE** any product that cannot be reused.

Vanderbilt campus recycles Plastic bottles and cups 1 and 2 (look for the number in the chasing arrows on the bottom of the item), Mixed Paper, Cardboard, and Aluminum. Glass recycling is available at the Peabody Recycling Center behind The Commons Center on a drop-off basis only. For recycling of Plastics 3-7, go to www.nashville.gov/recycle for the recycling drop-off site nearest you. **Vanderbilt School of Medicine** recycles Plastics 1-7, Mixed Paper, Cardboard and Aluminum. **Vanderbilt University Hospital** recycles Plastics 1-7 and Aluminum. All of VUMC recycles cardboard, and all of Vanderbilt recycles computers and electronics waste (e-waste).

Finally, it is important to support the recycled goods market by purchasing them whenever possible. You know that a product has recycled content when you see the recycling chasing arrows by it in a product catalog or online. The higher the recycled content, the more you are doing for the environment!

More specific information pertaining to how your office, department, or school can reduce waste, conserve energy and water, purchase green products, and commute environmentally is discussed below.

Reduce, Reuse, Recycle



REDUCE

Paper is the largest component of the solid waste stream in the United States by weight, comprising about 40% of total waste or 81.3 million tons a year. Paper is also a significant portion of most departments' budgets. The amount of paper used in office settings can be reduced by using less paper, reusing where appropriate, and recycling. Specific steps you can take to reduce paper usage include:

- ◆ **Communicate electronically** and create hard copies only when needed. Edit documents on screen using the "track changes" function and bookmark websites instead of printing to reduce paper usage.
- ◆ Change all printers, copiers, and faxes to their **double-sided printing** settings. In order to make this a default setting for Printers hooked up to a Windows computer, follow these steps:
 1. Click on Printers and Faxes under the Start menu
 2. Right click on the Printer with double-sided capabilities and go to Printing Preferences
 3. Under the Printing Shortcuts tab, there will be an option for Duplex (Two-sided) Printing.

***Did you know?** Double sided printing can reduce your department's paper budget by 30-50%. A small amount of these cost savings could then be used to purchase **paper with a recycled content of 30-100%**. In an office setting, implementing standard double sided printing combined with the use of recycled content paper is one of the most important things you can do for the environment.*

- ◆ Fax machines can be hooked up to a computer or a network, allowing for paperless faxing and a more convenient filing system. Websites such as www.efax.com and www.fax4free.com offer these kinds of services.
- ◆ Consider electronic magazine subscriptions and electronic books whenever possible, or purchasing an Amazon Kindle or similar e-reader. Books, PDFs, and word documents can be sent to e-readers and read on the go. Small, compact laptops with internet access capabilities are becoming more affordable, too.
- ◆ Use your email Inbox as a filing system and set up "storage" folders within your Inbox. Right click on the "Inbox" icon while it is highlighted and choose "New Folder." Name the new folder and choose your desired location and then click and drag the emails over to it to archive them. Many files eventually end up having to be emailed to someone, so after sending a document via email, the user can navigate to the "Sent Mail" folder in email and drag the email with the attached file to a storage folder in the Inbox. All emails and documents about a topic can be stored in one place.

- ◆ If your email account has limited storage space, and you find that storing emails and documents in your Inbox is not feasible, you can arrange for emails and documents to be saved periodically to your computer. In Outlook, this function is called Auto Archive.
- ◆ If you need to take a file to a location outside of your office (e.g. presentation) or to work on a document at home, just email it to yourself from work. You may then use the computers at your destination or your computer at home to access the email from the internet and open the document there. A new version can be emailed back to yourself at work.
- ◆ If you don't want to email a file to yourself, or can't because of large bandwidth, use a storage stick, mp3 player, iPod, or an external hard drive. Be careful with these transportable forms of storage because they can get lost and might have sensitive or confidential data on them.
- ◆ A networked system and shared drive space within your department or area allows individuals to share documents instead of emailing them to each other with the added benefit back up on Vandy's network. Offices that handle confidential and sensitive information can arrange to have different levels of access for shared drive areas, ensuring that only people who have clearance can access certain information. Sectional, personal, and project folders with different levels of access can also be set up within shared drive spaces. ITS administrators typically set-up network access and shared drive space.
- ◆ Online file sharing program like Google Docs allow users to modify and share files from multiple locations. If using such programs, PLEASE USE CAUTION, because much of the information Vanderbilt handles is governed by privacy laws like FERPA (<http://www.ed.gov/policy/gen/guid/fpc/ferpa/index.html>) and HIPPA (<http://www.hhs.gov/ocr/privacy/index.html>).
- ◆ Different filing styles work for different people. One suggestion might be to file by project or major area of responsibility, then by year. If you manage several people, you might want to create a folder for each person and their work.
- ◆ Wheeled bags make carrying a laptop around much easier, allowing you to take notes on your laptop that can be stored on the hard drive. This keeps the user from handling lots of paper.
- ◆ Suspend printing your pay advice. If you are using direct deposit and receive a blue pay advice, log into C2HR. A message will appear giving you the option to turn off your printed pay advice. Simply select "Yes."
 - 20,000 pay advices are printed each month at Vanderbilt.
 - If we eliminated printing pay advices, we could potentially save 16,000 pounds of wood and almost 14,000 pounds of greenhouse gas emissions per year and avoid creation of harmful air pollutants just from reduced paper usage, not including transportation or printing impact.



Other waste products besides paper can be reduced by doing things such as:

- ◆ Only buying what you need.
- ◆ Providing reusable mugs and cups instead of using disposable water bottles.

- ♦ Installing battery re-chargers and investing in rechargeable batteries.
- ♦ Considering renting or sharing infrequently used products.

REUSE

Get creative when it comes to reusing materials. Items like plastic bags and packaging can have a variety of uses once they serve their original purpose. Single sided printed paper can be reused to print drafts or for scratch paper or shredded and used as packing material. Easy ways to reuse magazines and books are to buy only one subscription or one book for your department and pass it around. Unwanted magazines and books can also be donated to libraries or local schools to be reread.

RECYCLE

Typically, **paper, cans, newspapers, cardboard, and plastic** can all be recycled. Vanderbilt's main campus recycles Plastic bottles and cups #1 and #2 (look for the number in the chasing arrows on the bottom of the item), Mixed Paper, Cardboard, and Aluminum. Glass recycling is available at the Peabody Recycling Center behind The Commons Center on a drop-off basis only. Vanderbilt School of Medicine recycles Plastics #1-7, Mixed Paper, Cardboard and Aluminum. Vanderbilt University Hospital recycles Plastic and Aluminum. All of VUMC recycles cardboard, and all of Vanderbilt recycles computers and electronics waste (e-waste). Compact fluorescent bulbs and batteries are also recyclable at VU.



If your office does not currently recycle, follow these steps to implement a program:

- ♦ If you are in a VU residence house, campus administrative or academic building, contact Jennifer Hackett, Campus Recycling Coordinator, at 615.34E.ARTH or recycle@vanderbilt.edu.
- ♦ If you are in a building that is not owned by Vanderbilt but is contracted through VU Real Estate Property Manager, contact Benji Rust at 615.343.4912.
- ♦ If you are in a VUMC building and part of the School of Medicine, contact Freddie Easley at 615.322.6107.
- ♦ If you are in a VUH building and serviced by Hospital Environmental Services, contact the Sustainability and Environmental Management Office at 615.322.2057 or Sustainvu@vanderbilt.edu.
- ♦ Anyone not included can contact your building manager, contract directly with a recycling company (such as Smurfit-Stone or Clean Earth) or install recycling containers yourself and transport them to the VU Recycling Center located on Appleton Drive between the Peabody maintenance building and the Commons Center. VUMC groups can also contact Freddie Easley at 322.6107 to find nearest drop off locations.



Used computers and electronics should be given to VUMC Storage and Services Department, which can be contacted at 615.935.4626. Information security instructions are provided on www.vanderbilt.edu/SustainVU. Never throw electronics or computers into the dumpster- U.S. regulations forbid it because these materials contain chemicals and heavy metals that are harmful to humans and the environment.

Toner cartridges can be recycled two ways at Vanderbilt:

1. Guy Brown will recycle toner and ink jet cartridges and donate a portion of the proceeds to Vanderbilt Children's Hospital. Here's how:
 - ◆ Call Guy Brown at 615.777.1500 or email customercare@guybrown.com to get free larger boxes for laser toners and a smaller box for ink jets (it's OK to put ink jets in the larger box if you have both.) These boxes will be delivered to you free of charge and have pre-paid, pre-addressed labels on them. The labels are coded to say that they came from VU so they know to give the proceeds to the Monroe Carell Jr. Vanderbilt Children's Hospital.
 - ◆ There are several way to send the cartridges back:
 - A. When your UPS driver comes with a delivery, send the box back with the driver. There is not charge if they are already at your site.
 - B. Call UPS (1-800-PICK-UPS). The shipping is free with your pre-paid label, but they will charge you a surcharge for coming out to get the package.
 - C. Place spent cartridge in the box that your new replacement cartridge came in and give it to your Guy Brown driver on the next office supply delivery.
 - ◆ When you run out of boxes, call for more.
2. Support the Susan Gray School on the Peabody Campus by recycling your cartridges (as well as cell phones and PDAs)
 - ◆ Go to the main entrance of the Kennedy Center off Magnolia Circle.
 - ◆ Ride the elevators down to the bottom floor.
 - ◆ Look for the drop off site as you exit the elevator doors.

Energy Consumption

LIGHTING

Lighting accounts for about 22% of the energy use at a typical university, according to the US Department of Energy (DOE). Properly designed and implemented daylighting strategies can reduce this number by 50 to 80%. Some tips to reducing your energy consumption through lighting changes include:

- ◆ **TURN OFF YOUR LIGHTS** when you leave a room, including common areas. The average office is occupied only 8 of 24 hours (33%); classrooms even less. You might consider assigning the last person to leave the office each day the job of turning off the lights in all common areas, such as break rooms, hallways, and workrooms.



Have you heard the myth that it uses more energy to turn a light on and off frequently than to just leave it on? Discovery Channel's MythBusters set out to bust this myth and were successful! Even with the fluorescent bulb having the largest start-up surge, the light needed to be off for only 23 seconds for it to be more energy efficient to turn the light off, rather than leaving the light on when leaving. **Turning off lights is the way to save energy, even if the room is unoccupied only for a few minutes.**

- ◆ Use Energy Star **Compact Fluorescent Light** (CFLs) bulbs wherever possible. Energy Star rated CFLs use 75% less energy than normal light bulbs and last 6-10 times longer. See www.energystar.gov for more details.
- ◆ Open shades to make use of natural lighting.

ELECTRONICS AND EQUIPMENT

According to the same DOE study, electronics and other equipment account for about 20% of energy usage at a typical university. This includes computers, monitors, electronic office equipment, and lab equipment.



- ◆ Program computer, fax/copy machines, and printers to their **energy-saving settings** including "sleep mode." A screen saver on the monitor **does not** save energy. Instructions on how to do this can be found at www.vanderbilt.edu/SustainVU or you can ask your LAN manager or ITS.

Did you know? *The typical desktop computer uses 60 to 250 watts of energy for each hour it is fully powered. In sleep/standby mode this decreases to 1 to 6 watts for each hour it is in sleep mode.*

- ◆ When computers are not going to be in use for more than a few hours, **turn them off** altogether if allowed. If your department or school requires that you leave the CPU on overnight for updates and backups, you should program your computer with sleep mode settings and turn off the monitor.

Did you know? *The typical 17" CRT monitor uses 80 watts of energy for each hour it is fully powered while a typical 17" LCD uses 35 watts for each hour it is fully powered.*

- ◆ Whenever possible, unplug electronics from the wall when not in use. They still drain a small amount of energy even when turned off (typically called "vampire" loads). A surge protector not only protects your electronics but provides an easy way to unplug them all at once.

HEATING AND AIR CONDITIONING



About 40%, the largest percentage, of the energy used on campus goes towards heating and cooling indoor spaces. Much of Vanderbilt's campus is heated with steam and cooled with chilled water, while other buildings directly use electricity. Our energy usage spikes during summer months from extensive air conditioning usage. Some suggestions for curbing our heating and air conditioning energy usage are to:

- ◆ Encourage your students, staff and faculty to **dress for the season**, particularly in layers that can help moderate personal temperature, and accept more seasonal indoor temperature settings.
- ◆ If you can control your thermostat, suggested settings for an office, lab or classroom thermostat are **75 degrees F in summer and 68-70 degrees F in winter**.
- ◆ If you can control your thermostat, adjust it more radically when everyone leaves for the day since the typical office is only occupied 33% of each day. Two easy ways to do this are to either assign the duty of adjusting the thermostat to the last person that usually leaves the area each day or invest in programmable thermostats for your area. Plant Operations (www.vanderbilt.edu/plantops) can purchase and install and programmable thermostat for you.
- ◆ If you do not control the thermostat for your area and think the indoor temperature seems extremely cold or hot, call Plant Operations (615.344.9675) for those on main campus and Plant Services (615.322.2041) for those in VUMC and alert them to the temperature extreme.

For more information on how to conserve energy at Vanderbilt, visit the ThinkOne website at www.vanderbilt.edu/sustainvu/thinkone.

Water Consumption

Each year, Vanderbilt consumes approximately 7.5 billion gallons of water. That's enough water to supply more than 55,000 families with water for one year! To do your part to save water:

- ◆ Turn off the water when it is not in use.
- ◆ Report and repair water leaks, broken toilets, and dripping faucets. On campus, contact Plant Operations at 615.344.9675; in the medical center, contact Plant Services at 615.322.2041.
- ◆ Wash full, rather than partial, loads of labware and dishes.



Green Purchasing

According to the United States Government, **Environmentally Preferable Purchasing (EPP)** refers to the procurement of goods and services that have a reduced effect on human health and the environment as compared to competing goods and services serving the same purpose. Since each department or school at Vanderbilt buys its own supplies and equipment, you can have a direct, significant impact on the local community and the environment by greening your department or school's purchasing.



OFFICE SUPPLIES

- ◆ Buy paper products with at least 30% postconsumer recycled content.
 - 30% recycled content uses 13% **less energy** and produces 15% **less solid waste**.
 - These products are already available through Vanderbilt's E-Procurement at no quality difference.
 - ASPEN™ printer and copier paper line from Boise comes in 30%, 50%, and 100% recycled content and color varieties.
 - Earth-friendlier cups are available from American Paper and Twine (APT) through E-Procurement.
 - **Dixie's Insulair Hot/Cold Cups** are made of 25% post-consumer recycled paper material with a 100% post-consumer recycled built-in sleeve; \$87.54/case (600) = \$0.15/cup (16 ounce).
 - **Solo's "Bare" Hot/Cold Cups** are made of at least 10% post-consumer recycled paper material and comes in sizes 4 to 20 ounces; \$68.96/case (1000) = \$0.07/cup (12 ounce).
 - **Solo's "Bare" Plastic (#1 resin) cup** is made of 20% recycled PET; \$89.99/case (1000) = \$0.09/cup (16 ounce).

For more options on earth friendlier product choices, please contact Jenny Kirby at American Paper and Twine at 615-350-9050 ext. 2250, or at jkirby@aptcommerce.com.

- ◆ When buying office supplies such as glue or liquid paper, choose
- ◆ **non-toxic** varieties.
- ◆ Purchase **recycled or remanufactured laser toner and ink jet cartridges** from Guy Brown through Vanderbilt's E-Procurement.
 - Recycled cartridges have been tested and page yields are equal to non-recycled varieties.
 - Remanufactured cartridges are produced from old printer cartridge parts that have been reused or repaired and examined, washed and tested individually to meet or exceed the cartridge manufacturer quality standards.
 - It's better to re-use parts of old printer cartridges than to create new waste that ends up in landfills or incinerators.

Did you know? Approximately 20-30% of all sold printer cartridges worldwide are a recycled cartridge.

- Guy Brown is a 100% minority-owned and certified Small Disadvantaged Business.
- Guy Brown donates money to Vanderbilt Children's hospital when Vanderbilt recycles a certain threshold number of cartridges.

ELECTRONICS AND EQUIPMENT



- ◆ Buy LCD flat panel monitors for your desktop computers. LCD Flat panels use **30% less energy than a CRT** and are less harmful to the environment. See www.dell.com/energy for more information about computer energy use.
- ◆ When purchasing any electronics or equipment, look for the **Energy Star or EPEAT** rating which ensures that the product uses energy efficiently as possible.
- ◆ Instead of using the elevator, take the stairs. You'll save energy and get some exercise!

REMODELING

- ◆ When having new carpet installed, choose carpet with **high postconsumer recycled content**. Some manufacturers that offer these carpets are Shaw and Interface.
- ◆ Consider installing **carpet tiles** instead of traditional carpet. Carpet tiles can be more economical and reduce waste because single tiles can be replaced when damaged or worn.
- ◆ Choose carpet and paints with **low or No Volatile Organic Compounds** (low or no-VOC).
- ◆ When purchasing wood furniture or wood flooring, look for wood that is FSC (Forest Stewardship Council) certified, meaning it came from a **sustainably harvested forest**.
- ◆ Purchase plastic and metal modular furniture that is **high in postconsumer recycled content** and easily disassembled. Products that can be taken apart and reconfigured are more easily repaired, reduce waste by being reused, and can be recycled.
- ◆ Check out surplus opportunities here at Vanderbilt. The Plant Services group out of the Medical Center has a Surplus Equipment Store at <https://plantservices.vanderbilt.edu/vandy/surplusequipPublic/>, which allows the Vanderbilt community and the public to purchase surplus items from their warehouse. Vanderbilt University also has a "Surplus Swap" program at [http://co-op.vanderbilt.edu/swap/VU - Surplus Swap](http://co-op.vanderbilt.edu/swap/VU-SurplusSwap), where the community can list surplus items, such as office supplies and computer equipment, which might be of use to others on campus.

Commuting and Transportation

Vanderbilt has a campus community of 33,000, making us larger than many towns in Tennessee. We have 22,000 staff and faculty that commute to work each day and have an average roundtrip commute of 48 miles. The impact our commuters have on the air quality in Middle TN is substantial, not to mention the parking situation on campus, and how congested the Vanderbilt area has become in recent years. Many employees are frustrated from traffic when they arrive at work each day, and recent inflations in gas prices have a direct financial impact on those that drive to campus. The cost to create parking on campus is also significant—according to a recent Vanderbilt View article, it costs \$23,000 for VU to create a parking space, not including maintenance of the space!



Encourage your students, faculty and staff to think about how they travel to and from campus and look for ways to walk, bike, carpool, vanpool or take mass transit. Taking advantage of commuter benefits not only improves the environment, but usually improves the standard of living of the commuter and saves significant amounts of money. Some specific ways that you could encourage your school or departmental members to improve their commute are:

- ♦ If possible, **ride a bike or walk** to campus to reduce emissions entirely and exercise at the same time. This includes going to and from lunch, or meetings on campus.
- ♦ **Take low-cost public transportation.**
 - Vanderbilt offers all faculty, staff and graduate students the MTA “Free Ride to Work Program” where Vanderbilt will pay the bus fare for any Vanderbilt employee or graduate student. Just swipe your ID badge when you board the bus. All bus transfers are free as well. The average MTA Nashville bus has 40 seats, which means the potential of 40 less cars on the road.
 - Additionally, Vanderbilt significantly subsidizes the fare for the Music City Star commuter train. Just go to websites or physical locations of the VMC Office of Parking & Transportation Services or the VU Office of Traffic & Parking to buy subsidized train passes.
- ♦ If you live outside the city or cannot take public transportation, **consider carpooling or vanpooling.** In April 2008, VUMC launched a new carpool and vanpool matching service for anyone with a Vanderbilt email address, which can be found at the VUMC Parking and Transportation Services website at www.VMCRideMatch.com. Other useful transportation and carpooling websites include www.rta-ride.org, www.mtanasville.org, www.carpoolconnect.com, www.erideshare.com, or www.zimride.com.
- ♦ If you must drive, make sure car tires are properly inflated for **improved gas mileage.**
- ♦ Use the **Vanderbilt Valet** to run your errands. The Vanderbilt Valet transports dry cleaning, groceries, etc. for a number of people at once, thereby reducing the number of single trips needed.
- ♦ Sign-up for the **Zipcar Program** at <http://www.zipcar.com/vanderbilt>. Departmental (no cost) and individual (\$35) memberships are available. Use one

of Vanderbilt's 5 Zipcars by the hour or by the day. The best part? Zipcar pays for the gas! This is a great option for commuters who do not drive to work but who have engagements off-campus during the workday.

- ◆ Consider taking advantage of the VU **telecommuting and flexible work shift policy** when possible. Both options are allowed by Vanderbilt Human Resources and can not only improve air quality by keeping cars from being on the road in peak rush hours but can also significantly improve employee morale, productivity, recruitment and retention.
- ◆ Need to transport something in the Downtown, West End or Green Hills area quickly? Instead of using FedEx, try **Green Fleet Messengers**, a Nashville bicycle courier service, to avoid creation of harmful air pollutants and greenhouse gas emissions. Visit www.greenfleetmessengers.com or call 615.463.0602 for more information.

Thank you for your interest in creating a “greener”
Vanderbilt.

Having an event like a retirement party, conference, or awards celebration? Interested in celebrating the holidays sustainably? Check out the Event Greening Guide and Holiday Greening Guide at www.vanderbilt.edu/sustainvu/greeningguides.php

For more information on any of the greening suggestions above or general sustainability information, please visit www.vanderbilt.edu/SustainVU.

If you would like to receive regular emails from SustainVU, send an email to sustainvu@vanderbilt.edu with the phrase “subscribe sustainvu” in the subject line.

For additional assistance with greening your department or school, please contact the Sustainability and Environmental Management Office at 615.322.2057 or sustainvu@vanderbilt.edu.

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