

Get Involved!



- Collaborate online with friends, students and faculty
- Network with other members of the environmental community
- Find environmental jobs on and off campus
- Identify new funding and grant opportunities for student campus greening initiatives
- Use in and out of the classroom for team projects
- Learn about events locally and globally and post your own!

Request an account today!
<http://ecolinkup.tufts.edu>

JUMBO DROP!

Outgoing students leave a lot behind. *Tufts Recycles!* collects end-of-the-year donations, stores items over the summer and then sells them to students at a Labor Day yard sale. Proceeds from the fall sale benefit the recycling program as well as donations of food, books, clothing and linens to various non-profits. **Watch** www.tufts.edu/tuftsrecycles/jumbodrop.htm for details!



JOIN Student Organizations

- **Environmental Consciousness Outreach (ECO):**
<http://ase.tufts.edu/eco>
- **Energy Security Initiative (ESI):**
<http://ase.tufts.edu/esi/>
- **Tufts Mountain Club (TMC):**
<http://ase.tufts.edu/mountainclub/>
- **Tufts Mystic Waterwatch:**
<http://ase.tufts.edu/lcs/volunteer-opportunities.html#95>
- Volunteer at **Oxfam Café**, a student-run vegetarian cafe
<http://ase.tufts.edu/Oxfam>
- **PANGEA:** <http://ase.tufts.edu/pangea/>
- **SENIORS! Sign the Graduation Pledge!**
<http://ase.tufts.edu/pjs/pledge.html#sign>



Contact the Office of Sustainability for job opportunities, project ideas, or links to other issues

Tufts University Office of Sustainability
210 Packard Avenue
Miller Hall, Tufts University
Medford, Massachusetts 02155

Phone: 617-627-5517
Fax: 617-627-6645
<http://www.tufts.edu/programs/sustainability>

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Tufts

Sustainability in Action!
gets green

The Guide to Living & Working Green



at

Tufts

Letter from the Office of Sustainability

Welcome to The Guide to Living and Working Green at Tufts! Your Guide for putting sustainability in action.

The goal of this Guide is to provide you with helpful tips and information about ways you can join the efforts of the Tufts community to conserve resources, reduce our ecological footprint, and foster a sustainable university community.

Environmental stewardship and active citizenship are strong Tufts traditions, from a leadership commitment to reduce greenhouse gases to recycling, organic food choices, and pesticide-free athletic fields. With your help, we can continue to integrate sustainable habits into everyday campus life.

Thank you for taking time to read this Guide. Use our recommendations as a starting point for taking steps to integrate sustainable behaviors into your daily life. We appreciate your participation and welcome your ideas and feedback.

Sarah Hammond Creighton
Director, Tufts Office of Sustainability



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work greener...

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This guide is printed on 100% recycled paper using soy-based ink.

<http://www.tufts.edu/programs/sustainability>

Resources

At Tufts:

Exchange incandescent bulbs for CFLs for free at the OOS, in the Miller Hall basement. Email tc1@tufts.edu for more information.

Tufts Student Resources rents an Energy Star MicroFridge@Combination Appliance: www.tuftsstudentresources.com

To report leaks, call work control at x7-3496 (Medford), x6-3535 (Boston), or x8-7921 (Crafton), or fill out an online request at https://facilities.ca.tufts.edu/tufts_webrequest_max/

For information about recycling or to request a bin, call x7-3947, email recycle@tufts.edu, or visit www.tufts.edu/tuftsrecycles/

Tufts Climate Initiative's (TCI) Energy Resources are available at: www.tufts.edu/te/tci/Downloads.htm

Beyond Tufts:

Be a conscientious consumer. Learn how at:

- www.thegreenguide.com
- www.newdream.org

To find nearby Farmer's Markets and local groceries. Visit:

- www.localharvest.org
- www.mass.gov/agr/markets/farmersmarkets/index.htm
- www.massfarmersmarkets.com/

For green food shopping, check out the world's largest directories of green and organic businesses at www.organicconsumers.org

Verify your food's label at www.eco-labels.org.

Seventh Generation's Green Cleaning Tips:

- www.seventhgen.com/living_green/toxic_cleaning/cleaning_tips.html

For a list of places that might accept your computer for recycling.

- <http://sharetechnology.org/>

Interested in green and sustainable clothing?

- <http://nosweatapparel.com/shop.htm>
- <http://www.greenhome.com/products/>
- <http://www.greengiftguide.com/>
- <http://www.behindthelabel.org>

Check out these great websites:



Feature: Is flying green an oxymoron?

- Carbon dioxide (CO₂) is one of many greenhouse gases that influence the planet's climate. Air travel's contribution to global CO₂ emissions are increasing rapidly. Experts predict that by 2050, annual aircraft emissions will reach well over a billion tons of greenhouse gas [1]. Already, 13% of total global transportation-related carbon dioxide emissions are released by airplanes [2].
- We all need to minimize our air travel. Some flying might be unavoidable, for example for academics who need to attend professional conferences, for students who wish to visit their relatives.

The question of whether traveling by car or by plane is the more environmental choice has no easy answer.

Even so, here are some quick fixes for you to consider:

- If you can **avoid traveling for business** by using video and phone conferencing, do it!
- If you have the option of taking the train instead of the plane or car, **take the train!**
- If you can choose between local vacations and vacations somewhere far away in the tropics, **stay local!**

If you have to fly...

- Use the **most direct route possible** because take-off and landing require the most fuel during a flight.
- Fly **economy instead of business class**: Less leg-room means room for more people and fewer emissions per person.
- Buy **carbon offsets**: When you buy carbon offsets, you abstain from reducing your own emissions and pay someone to reduce their emissions in your stead.

More about offsets:

Who? Consumers who are concerned about their environmental impacts but who cannot avoid flying completely, may wish to neutralize their travel emissions by purchasing carbon offsets.

How? Individuals calculate the amount of carbon emissions they are responsible for and purchase an offset for that amount. The funds the offset company receives are then used to implement and manage projects that avoid, reduce, or absorb greenhouse gases through renewable energy, energy efficiency, or forest and other bio-sequestration projects.

The Tufts Climate Initiative evaluated 13 voluntary offset companies, read their report online: http://www.tufts.edu/tie/tci/pdf/TCI_Carbon_Offsets_Paper_April-2-07.pdf

References:

- [1. <http://www.gbgonline.org/flyinggreen.pdf>]
- [2. <http://www.gristmagazine.com/grist/counter/counter/082801.asp?source=daily>]
- [3. <http://www.gristmagazine.com/grist/counter/counter/082801.asp?source=daily>]

In Your Dorm or Office...

Save Money and Energy!

Lighting:

Turn the lights off whenever you leave a room!

Replace incandescents with compact fluorescent light bulbs (CFLs), which use 66% less energy and last ten times longer.



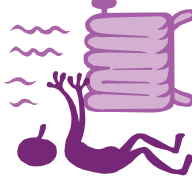
Quick fix: Exchange your incandescent for a CFL for FREE at the Office of Sustainability, in the Miller Hall basement (entrance in back)

Heating:

Too hot? Turn down your radiator valve or thermostat!

If you have a problem, **call work control at 7-3496 (Medford), 6-3535 (Boston), or 8-7921 (Craffon)**, or fill out an online request: https://facilities.ca.tufts.edu/tufts_webrequest_max/

Close your windows. Want fresh air? Open your windows for 10 minutes, then close them— this has the same cooling effect as leaving it open all day, but doesn't waste energy.



Computers:

Choose a laptop. Laptops use 80% less energy than desktops. If you must use a desktop, flat screen monitors use less energy than regular monitors.

Choose an Energy Star model. Buying a computer with the Energy Star label means that it has been manufactured to be more energy efficient than products of the same size without the label.

Turn your computer off at night— rather than idle while you sleep.



Quick fix: Enable your power management feature and select the number of minutes after which you want your screen and CPU to power down. We recommend 5-15 minutes.

Learn how at www.tufts.edu/tie/tci/powermanagement.html



TSR rents an Energy Star MicroFridge-Combination Appliance

Refrigerators:

Small fridges are highly inefficient, using up to 4 times as much energy per volume than normal-size fridges.

Look for Energy Star fridges, and make sure you read the label to see how efficient the appliance is.

Quick fix: The best alternative is to not use one; use the common refrigerator instead. Clean and unplug refrigerators during vacation breaks.

Reduce Standby Energy:

Electricity is consumed even when appliances are not in use. Standby energy can account for up to 10% of household energy consumed.



Quick fixes: Unplug electronics when not in use to prevent consuming standby energy or Plug appliances into a power strip and turn off the strip to prevent consuming standby energy.



In 2000, the 15 countries of the EU lost ~94 billion kWh of energy to standby consumption—the output of 12 large nuclear or coal power plants.

Purchase Renewable Energy:

Get Clean power your room green!

Buy Wind power for your dorm room!
\$10 per semester, pay with points, cash or check.



Learn more online at www.tufts.edu/tci/getclean

In 1999, Tufts committed to reduce its greenhouse gas emissions 7% below 1990 levels by 2010.

Getting Around Greener

Bike!

Don't know how to fix it? Make friends with a Tufts Cycling team member or visit your local bike shop (closest bike shops are *Paramount Bicycles* on Broadway near Powderhouse Rotary, and *ACE Wheelworks* on Elm between Davis and Porter)

Don't forget to register your bike with the TUPD

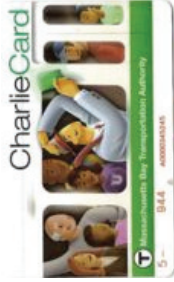


Don't Drive, Get a Charlie Card!

Use the MBTA bus and subway service.

Bus routes near Tufts:

- 94 to Davis Square
- 96 to Medford and Harvard Square
- 80, 87, 88 to Lechmere Station (Cambridgeside Galleria)



21+? Join Zipcar!

Tufts students, faculty and staff can join Zipcar for only \$25/year (saves \$25)! Students, faculty and staff pay no application fee, no monthly minimum, and no membership deposit. Hourly charges of \$9-11 cover all insurance, maintenance, and gas.

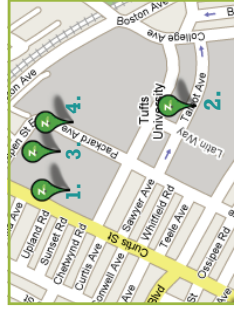


Each Zipcar replaces over 20 privately owned vehicles. The Zipcars at Tufts are all hybrids.

Your Zipcar membership provides access to Zipcars all over Boston, New York, Washington DC, Chicago, London, San Francisco, Toronto, and Vancouver.

There are currently 4 Zipcars available at Tufts: <http://www.zipcar.com/tufts/>

1. Blakeley Hall
2. Jackson Gym
3. Miller Hall
4. West Hall



In the U.S., roughly one-third of all CO₂ emissions come from transportation sources. Transportation, as a source of greenhouse gases, is growing more rapidly than other major sectors, both in the U.S., and globally.

Green Your Cleaning

Purchase less toxic products. Just because a product says it's natural doesn't mean it's nontoxic! Look for **Green** Attributes:

- Non-toxic (e.g. no ammonia)
- Not tested on animals
- Biodegradable
- Not solvent-based
- Ingredients from renewable resources (e.g. vegetable versus petroleum)



Buy laundry detergent that is phosphate free. Detergents are released with sewage water. When phosphates are present, they enter the environment and poison aquatic life.

Look for cleaners that are ammonia free (non-toxic), biodegradable, and not animal tested. These products are not as harmful to the environment when they leach into water and soil.

Quick fix: Try vinegar and baking soda.



Green brands to look for:

- Seventh Generation
- Ecover
- Sun and Earth
- Imus Greening the Cleaning Method

Environmental Impacts:

Cotton is the most heavily pesticide-intensive crop grown in the United States. To make the average cotton T-shirt, requires 500 liters of water and 40g of pesticides.

Social Justice Impacts:

14 million Americans consume water contaminated with agricultural pesticides. Sweatshop workers in Mexico earn 85 ¢/hr for their labor and in Indonesia workers earn 15 ¢/hr.

Green Your Wardrobe

What can you do?

- Buy fewer clothes!
- Avoid clothing brands that have been known to use sweatshops.
- Donate your old clothes to thrift stores like Goodwill, or buy inexpensive "recycled" garments from these stores.
- Purchase at least some items from up-and-coming fair trade brands and makers of organic cotton and natural fiber clothing.

Quick fix: when buying clothes, look for items

- Made in the U.S.A.
- With recycled content
- Made from **100% Organic Cotton, Bamboo fabrics** (100% biodegradable and grown without pesticides or chemicals), or **Hemp** (grown without pesticides).

Conserve Water

Tufts has long been on the forefront of implementing sustainability measures. Water conservation projects have helped to substantially cut water use on campus.

In the bathroom...

Don't take marathon showers. Turn the water off when you lather, shampoo, etc.

Turn off the tap while brushing your teeth and shaving.

In the kitchen...

Store drinking water in the fridge rather than running the tap.

If you're washing dishes by hand, **don't leave the water running for rinsing.** This can save 8-15 gallons of water/day!

Use basins to wash vegetables and fruits. Compared with the faucet, this could save 2-4 gallons/day.

Avoid using running water to thaw meat and other frozen foods. Let it sit overnight in the refrigerator.

Only run your dishwasher **when full.**

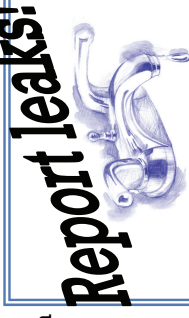
In the laundry room...

Clothing life cycle

assessment studies show that even in a short 2 year life span, over 75% of the energy consumption for apparel comes from their laundering.

Quick fixes:

- Choose a **FRONT-LOADING** washer
- Only wash **FULL** loads
- Only wash in **COLD** water
- **LINE DRY** laundry in spring and summer
- Avoid the permanent press cycle, it adds 5 gallons for the extra rinse!



Call work control at:

x7-3496 (Medford)

x6-3535 (Boston)

x8-7921 (Grafton)

Or fill out an online request at https://facilities.ca.tufts.edu/tufts_webrequest_max/

Educate yourself:

<http://eartheasy.com>

live_water_saving.htm



Front-loading washing machines use
40 - 60% less water, 30 - 50% less energy, and
50 - 70% less detergent less than top-loaders!

Recycle

Recycling in On-Campus Buildings

PLEASE SORT AND RECYCLE:

Paper, cardboard, plastic, metal and glass containers, batteries, cell phones and ink cartridges. When moving out, put all batteries other electronics in a **Jumbo Drop** box. Questions, Suggestions? Contact *Tufts Recycles!* x7-3810 | recycle@tufts.edu



Please Recycle: Cardboard, Magazines, Newspaper, Envelopes (Plastic Windows are OK), Paperback Books, Cereal Boxes, Notebooks, Folders, White, Colored and Glossy Paper, beverage cartons. **All** paper is recyclable. Don't worry about staples, paper clips, binders, etc.!



Please Recycle: #1 - #7 Plastics, Cans (tin, steel, and aluminum), Glass bottles, Aluminum Foil and Trays, Empty Aerosol Cans, Aseptic "drink boxes", Juice and Milk Cartons, empty photocopier toner bottles



Trash: Pizza Boxes, Carbon Paper, Coffee Cups, Plastic Bags, Film, Plastic ware (i.e. Tufts catering), Styrofoam, Paper cups and Plates, "Soft paper" like tissues or napkins

Need a bin? Ask Tufts Recycles for one!

Call the hotline at x7-3947 or email us at recycle@tufts.edu

"How-to" recycling questions?

Visit <http://www.tufts.edu/tuftsrecycles/howto.htm>



Feature: Composting at Tufts

-Each day the Medford campus composts about 1000 lbs. of food; 170 tons of food were composted in 2007.

-Since 2001, the total amount of food composted has increased by almost 70 tons, a 62% reduction in yearly solid food and non-food waste.

-Dining Services collects both pre- and post-consumer food waste to be transported to a commercial compost site.

Composting at Tufts is facilitated by Dining Services and Tufts Recycles

At local restaurants committed to supporting local farmers and sustainable ingredients

- Casablanca, Cambridge
- Centre Street Café, Jamaica Plain
- Garden of Eden Café, Boston
- Henrietta's Table, Cambridge
- Nashoba Brook Bakery, Boston
- Oleana, Cambridge
- Perdix, Boston
- Sel de la terre, Boston
- The Independent Bar and Restaurant, Somerville
- Veggie Planet/Club Passim

Buy Organic!

Organic food is produced with only organic pesticides and fertilizers, is not genetically modified and does not entail the use of antibiotics or hormones. Organic products are certified based on production standards for growing, storage, processing, packaging and shipping that include:

- Avoidance of synthetic chemical inputs such as fertilizers, pesticides, antibiotics or food additives.
- Use of farmland that has been free from chemicals for a number of years (often, three or more).



If you have the choice between buying local or organic—buy local!

At Tufts

Organic whole wheat pasta, legumes, whole grains and tofu can be found at the vegetarian stations in the halls.

Buy Fair Trade!

Fair Trade Certified products guarantee that farmers and workers received a fair price for their product. Every step has been monitored and certified by Transfair USA, a neutral 3rd party certification agency.

At Tufts

- Fair trade bananas are available in Tufts dining facilities.
- Fair Trade coffee is served exclusively at the Tower Café, Oxfam Café, and the Rez.
- Fair trade options are available in Brown & Brew, Carmichael, Mugar, and the Campus Center Commons.

North American consumers usually pay \$4-11/lb. for coffee bought from growers for ~80 ¢/lb. Fair Trade benefits over 550,000 coffee farmers in 22 countries and 42,000 cocoa farmers in 8 countries.



Green Your Plate

1. Eat less meat!
2. Buy Local!
3. Select Organic!
4. Buy Fair Trade!

Eat less meat!

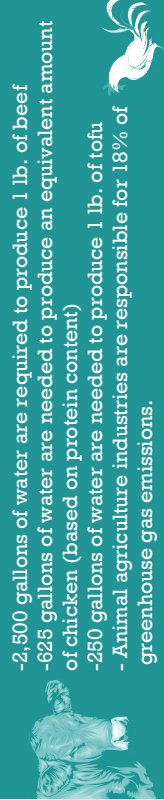
Eating less meat will greatly reduce your negative impact on the environment. Beef needs a tremendous amount of water and energy to produce. If you still want to eat meat, make choices to lessen your impact:

- **Choose poultry and avoid red meat!** The pollution and water and energy use is much smaller and it is healthier than red meat.
- **Buy organic meat products!** If you still like to eat beef or other meats now and then, organically produced meats use sustainable agriculture practices and involve much more humane treatment of animals.

- **Tufts Dining Services offers vegetarian options at every meal:** eating foods such as grains and soy products conserves resources—more than half of the global corn crop is used for animal feed!

- Tufts Dining uses 100% cage free liquid eggs.

- Sustainable fish are featured regularly in the dining halls.



- 2,500 gallons of water are required to produce 1 lb. of beef
- 625 gallons of water are needed to produce an equivalent amount of chicken (based on protein content)
- 250 gallons of water are needed to produce 1 lb. of tofu
- Animal agriculture industries are responsible for 18% of greenhouse gas emissions.

Buy Local!

At Tufts

— Dining halls have local apples and other seasonal New England produce.

At Farmer's Markets

- Davis Square, Somerville Wed. 12-6
- Central Square, Cambridge Mon. 12-6
- (Corner of Day and Herbert Streets) (Bishop Allen Dr., Parking Lot #6)
- Union Square, Somerville Sat. 9-11
- Copley Square, Boston Tues. & Fri. 11-6
- (Along Saint James Ave., in front of the Trinity Church)

Farmer's markets are generally open from May through Thanksgiving but check websites for specific start dates.

At local grocers committed to supporting local farmers and sustainable ingredients:

- Wild Oats in Medford
- Harvest Co-op in Cambridge
- Whole Foods in Cambridge & Boston
- Boston Organics (home delivery)



Recycle Your Electronic Waste (E-Waste)

Ever wondered what to do with outdated technology?

It's hazardous and does not belong in the trash!

Computers, monitors, printers, TVs, VCRs, and DVD players *should be recycled* because they contain mercury, cadmium, chromium, and other hazardous metals and materials.

Due to lower environmental standards and working conditions in developing nations like China, India, Kenya, America's electronic waste is often sent to these countries to be processed and in most cases illegally.



Quick Fix: leave your old technology in a Jumbo Drop box* at the end of the year. *Broken computer equipment in the Jumbo Drop box should be labeled "broken". This helps to distinguish between items for donation and recycling.*

Outdated computers:



Try to donate or recycle your old computers before they become totally obsolete. If you wait too long to dispose of your computer— you'll have to recycle, not reuse.

The EPA estimates that 75% of computers sit in storage for several years before finally getting thrown away!

Contact your computer manufacturer about their recycling program (Dell, Apple, IBM, and others will recycle your computer for \$30 or less including shipping!). Learn more from the EPA's e-cycling website: <http://www.epa.gov/epaoswer/hazwaste/recycle/ecycling/index.htm>

Cell phones, batteries, and ink cartridges:

- Recycle **cell phones** on campus! Cell phones can be recycled with batteries and ink-jet cartridges in the collection containers around campus. *Tufts Recycles!* donates collected phones to MassRecycle.

- Almost all **batteries** (including computer batteries!) can be recycled at Tufts, with the exception of liquid and gel acid batteries (e.g. car batteries)

Please put a piece of tape over the ends to prevent a fire hazard

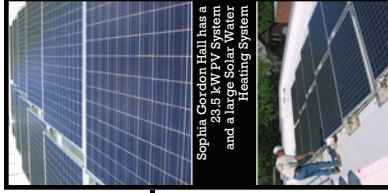
- **Ink-jet cartridges** from desktop printers can be recycled on campus in the cell phones and battery containers.



Feature: Sophia Gordon Hall Tufts' first "green" building

Sophia Gordon is a 126-bed residence hall on Talbot Avenue with environmentally friendly design features. The project team, motivated by Tufts' stated commitment to meet goals to reduce greenhouse gas emissions, incorporated numerous sustainable technologies and design elements into Sophia Gordon Hall, including:

- **30% Energy Use Reduction:** The building's design optimizes energy performance to achieve a 30% reduction in overall energy use.
- **30% Water Use Reduction:** Apartments, bathrooms, and laundry rooms have water efficient appliances, low-flow faucets, dual-flush toilets, and a waterless urinal.
- **Solar Thermal and Photovoltaic Rooftop Arrays** provide hot water and generate electricity to minimize energy loads.
- **Improved Environmental Air Quality:** The carpet and sheet vinyl adhesives, sealants and paints were chosen because they have very low or no volatile organic compounds (VOC) emissions. VOC emissions contribute to indoor air pollution. The building is non-smoking, even during construction.
- **Reuse, Reduce, Recycle:**
 - 75% of the waste from the building site was recycled or salvaged with a waste management program.
 - 10% of the materials in the design contain post-consumer or post-industrial recycled content.
- **New Glass Technologies:** The Low-E insulated windows and the ceramic-fritted and louvered glass walls reflect heat in the summer months and reflect radiant heat indoors in the winter months.
- **Storm-water Management:** An underground storm-water retention system collects runoff from impervious surfaces and recharges it on-site, minimizing the load on the city's storm drains.



Sophia Gordon Hall has a 23.5 kW PV System and a large Solar Water Heating System

Smart Shopping:

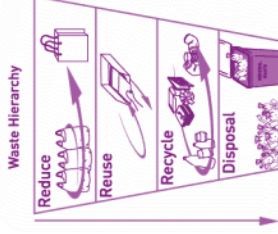
The greenest shopping is *no shopping*

Reduce your environmental impact and **buy less stuff!**

Ask yourself, "Do I really need this?!"

If you have to buy something, choose wisely:

- **Recycle: buy used goods!** Shop at thrift stores and yard sales.
- **Choose quality!** When buying anything, choose **products with long life spans and durability** (refillable pens, pencils, durable bags).
- **Choose goods made out of post-consumer waste and high recycled content** (e.g. printer paper made from 100% recovered scraps from consumer use).
- **Look for items with less packaging.**
- Instead of getting a new cup every time, **carry around a refillable water bottle or mug to reuse.**



Quick fix: Dining Services offers a 5 ¢ discount on beverages served in reusable mugs.



Don't let reusable items end up in landfills, there is no such thing as "away"!

- *At the end of every school-year*, donate items to **JUMBO DROP** instead of throwing them away. *Tufts Recycles!* collects your donations, stores items over the summer, and sells them to students at a Labor Day yard sale.
- Sell or give away items on **Craig's List** (<http://boston.craigslist.org>).
- Donate old eyeglasses to charities like the Lions Club International.