



Hear Today, Recycled Tomorrow

Remember the days when a video cassette recorder was *the* new thing, a personal computer was something you only used for word processing at your job, and phone booths were everywhere? Seems like only yesterday doesn't it? Lots of people have now moved on to a DVD player, replaced their computer diskettes with CDs, and grocery shop while talking on their cell phone.

The number of electronic devices we now can buy keeps growing and they seem to become obsolete right after the purchase. Technology can make life easier and more fun, but all that outdated equipment and accessories also create enormous amounts of unwanted and toxic trash.

For example, the U.S. Environmental Protection Agency (EPA) states that every month approximately 100,000 pounds of CDs become outdated, useless or unwanted and more than 5.5 million boxes of software go to landfills or incinerators. CDs and DVDs are made from mainly plastics and metals, such as aluminum, polycarbonate (a type of plastic made from crude oil and natural gas), lacquer made from acrylic, gold, chemical dyes partially made from petroleum products, and numerous other materials such as water, glass, silver and nickel. When they are manufactured and eventually disposed, they can release chemicals that contribute to global warming and create environmental and health problems. When we "reduce" - like borrowing a DVD from the library instead of buying it, reuse or recycle them, we conserve natural resources and decrease the quantity and toxicity of our trash.



DEP employees hold Techno Trash event

DEP employees took steps in that direction by holding a "Techno Trash" swap and recycling collection for CDs, DVDs, VHS tapes, computer disks, audio tapes and jewel cases (the plastic cases that hold CDs). The event, held on Nov. 16 and 17 during lunchtime at DEP headquarters, was organized to celebrate America Recycles Day. Employees swapped things like outgrown Barney videos, an

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Hear Today,

Recycled Tomorrow (continued from pg. 1)

unloved The Carpenters Greatest Hits CD, and many more under appreciated, unopened or "why did I ever buy that?" movies, exercise tapes and music CDs. Someone even took home all of the jewel cases! DEP collected more than 150 pounds of materials in three "Techno Trash Cans".

The three "cans" of unwanted or damaged materials were sent to Green Disk for recycling. Green Disk, which is headquartered in Sammamish, WA, accepts diskettes, CDs, DVDs and jewel cases, video and audio tapes and their cases, inkjet and toner cartridges, cell phones, pagers and PDAs (personal digital assistants like Palm Pilots). Although there is a nominal cost involved to participate in their "Techno Trash" program, Green Disk provides a "Certificate of Destruction" with a bonded guarantee that the intellectual property and all of the materials are disposed of in an environmentally responsible manner.

Green Disk's primary focus is on reuse, then recycling. They reformat and re-label outdated, but never used disks from software companies and then sell them in environmentally friendly packaging. These disks are thoroughly tested and guaranteed to be virus and error free. They also sell re-writable CDs in jewel cases made from the high quality plastics from recycling collections like the one held at the DEP. Even their packaging is made from recycled paper. So customers can recycle and close the loop by purchasing products with recycled content.

If you are interested in having a Techno Trash collection at your workplace or school, you can get details on their website at www.greendisk.com.

Some Tips on reducing CD and DVD waste

- Find out if the information you're looking for on disk is available over the Internet. If so, you may not need to buy the disk at all.
- Buy used CDs and DVDs or borrow them to help reduce the environmental impact associated with manufacturing new products.
- Dispose of unwanted CDs or DVDs only when you have no other choice. Instead, sell them to used CD stores, share or trade them with friends or donate them to schools, libraries, or other organizations.
- If you do make a purchase, also consider buying the one with the least amount of packaging.
- Prolong the life of your disks by keeping them out of direct sunlight and away from heat and water. To repair minor scratches, rub a mild abrasive (e.g. a non-gel toothpaste) on the non-label side in a circular motion from the center out—or bring the disk to an inexpensive commercial refinisher.

Tips taken from <http://www.worldwatch.org/pubs/goodstuff/cddvd/>



So what about reusing those damaged or unusable CDs we have accumulated? Get crafty! For an amazing number of creative ideas go to <http://www.make-stuff.com/recycling/cd.html>.

New Energy Guide for Towns

The DEP Office of Pollution Prevention has put together an Energy Guide, especially geared to assist municipal officials. The 10-page guide covers topics such as energy efficiency (lighting, buildings, transportation), renewable energy for towns, greenhouse gas reduction strategies and campaigns, and contacts for more information. For a copy of the guide, visit DEP's website at http://www.dep.state.ct.us/wst/p2/energy/municipal_energy_resource_guide.pdf or call (860) 424-3297.

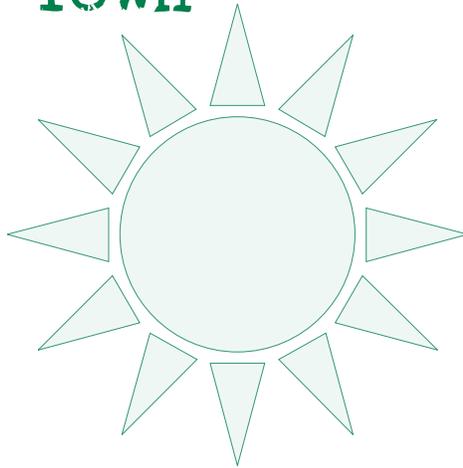


Earn Solar Panels for Your Town

Connecticut Clean Energy Communities Program is a partnership between the Connecticut Clean Energy Fund and SmartPower, whose purpose is to assist communities in the purchase and support of clean energy. Currently, there is a mandate in Connecticut that stipulates a certain amount of electricity must come from clean energy sources. While this renewable portfolio standard is an important public policy that supports clean energy, the Clean Energy Communities Program provides an incentive for local municipalities to voluntarily do more.

By encouraging local businesses and residents to sign-up for the Connecticut Clean Energy Choice option (offered by Connecticut Light & Power and United Illuminating), cities and towns throughout Connecticut can earn a free solar photovoltaic system. In order to qualify for these systems communities must:

1. Commit to the 20% by 2010 Clean Energy Campaign led by SmartPower.
2. Sign-up local residents and businesses to the CT clean energy choice option offered by CL&P and UI.



The lesser of any of the following earns a free 1 kW clean energy system (\$10,000 minimum value):

- (1) 100 sign-ups,
- (2) 1 GWh of clean energy demand created, or
- (3) 10 percent of households in a community,

3. Commit to allocating 100% of the electricity savings resulting from the installation of the clean energy system to additional town purchases of clean energy.

Through participation in this program, cities and towns in Connecticut can further their commitment to clean energy and reduce the community's impact on the environment. If your city or town is located in the load congested zones of southwest Connecticut, then there is additional benefit for qualifying programs. It is estimated that for each 100 signups to the 20% by 2010 program, it is equivalent to taking 83 cars off the road, not burning 897 barrels of oil or eliminating 425 tons of carbon dioxide, that would otherwise add to the global warming problem.

For more information, visit the CT Clean Energy Fund's website at: www.ctcleanenergy.com

Note: This is a new feature that offers answers to select environmental questions. Send your question to the editor's address -- judith.prill@po.state.ct.us and watch future issues for an answer.

Dear *Eartha*: You've convinced me that compact fluorescent light bulbs save energy (and money), but I just heard that they have toxic mercury in them. Is that true and if so, should I still buy them for my home?

---Ed K., Middletown, CT

Compact fluorescent light bulbs (CFLs) do contain a small amount of mercury vapor, as do the fluorescent light tubes. The mercury vapor is what allows CFLs to be brighter than regular light bulbs (incandescent) using far less wattage. But since CFLs use 75 percent less energy than incandescents, they don't require power plants to burn as much fuel – reducing overall pollution.

So now you know that CFLs can actually help prevent pollution - - but since they do contain small amount of mercury vapor sealed inside the bulb, you should dispose of them differently than incandescent bulbs. When a CFL burns out (after average 7 year life span – another good reason to buy them – you don't have to deal with burned out bulbs as often), take them to a household hazardous waste (HHW) collection or check with your town's public works department to see if they have a special collection for fluorescent lights.

- *Eartha*

For a list of HHW collections, visit DEP's website at <http://www.dep.state.ct.us/wst/hhw/hhw.htm>.

For more information on CFLs, visit EPA's website at http://www.energystar.gov/index.cfm?c=cfls_pr_cfls.



Say it ain't so. No more Garbage Gazette?

That's right. But it's not gone — the Garbage Gazette, the oldest DEP publication (since 1982) has transformed into the "Recycling Round-up" and, is officially being recycled into the P2 View. The Recycling Round-up will continue the work of the Garbage Gazette and cover recycling and other solid waste issues affecting our state. It's a natural fit. Recycling and pollution prevention (P2) aren't stand-alone issues. P2 is a broad topic encompassed by the big picture of sustainable development and climate change and waste and recycling issues are certainly important components of both.

In Connecticut, we have had mandatory recycling since 1991 and yet, after thirteen years there are still many challenges to overcome, some old and some new. Connecticut, like most of the rest of the country, has seen recycling rates level off. We need to get those rates climbing again. Why?

Because recycling and source reduction result in a myriad of environmental benefits such as: energy savings; conservation of natural resources; reduction in pollution emitted to our air and water; water conservation; and reduction in green house gas emissions. Case in point – source reduction and recycling issues are so important that the January 2004 report "[Connecticut Climate Change Stakeholders Dialogue: Recommendations to the Governor's Steering Committee](#)" included in its recommendations that the state pursue improving recycling and waste reduction efforts as a way to deal effectively with greenhouse gases that contribute to global warming. Recycling and source reduction, like P2, help create a healthier world for future generations and ourselves by minimizing further damage and depletion of our natural resources. Recycling is one tangible activity that people can practice daily that illustrates the value of "[thinking globally and acting locally.](#)"

But it's economic as well – we are running out of in-state solid waste disposal capacity. Unless we decrease the amount of waste requiring disposal, we may have to resort to more costly disposal options (including increased environmental impacts related to greater transportation distances). Any increase is a potential drain on already strained state and municipal budgets.

So welcome Recycling Round-up to the P2 View family. We'll explore potential solutions for dealing with our complex waste issues. We look forward to hearing from you.

Welcome!



Talking Trash

Over 70 people, including business owners, community leaders, local and state officials, college students and neighborhood activists, attended a community forum held in November on the Hartford Landfill. The forum was a chance for the community to discuss the facts and issues affecting the upcoming closure of the landfill, a regional facility that accepts waste and ash from 69 Connecticut towns. The Hartford Neighborhood Environmental Partnership (HNEP) co-sponsored the event.



The CT DEP's Office of Pollution Prevention initiated the HNEP in 1995 after receiving a grant to work with low-income Hartford neighborhoods to enhance economic opportunities and quality of life by raising environmental awareness and furthering environmental compliance. Along with DEP and neighborhood organizations, the partnership now includes representatives of city and regional government and non-profits promoting community gardening and advocating for health and environmental justice. [The HNEP just recently received an award from the Connecticut Coalition for Environmental Justice for its outstanding efforts to improve Hartford's environment.](#) For more information, contact the DEP Office of Pollution Prevention at (860) 424-3297 or visit <http://www.dep.state.ct.us/wst/p2/urban/urbanin.htm>.

Reading, Writing, and Recycling

What has 90 thumbs and finds a second life for leftover lunch, old sneakers and cell phones? It's the "Green Thumbs" club at Southeast Elementary School in Mansfield, Connecticut.

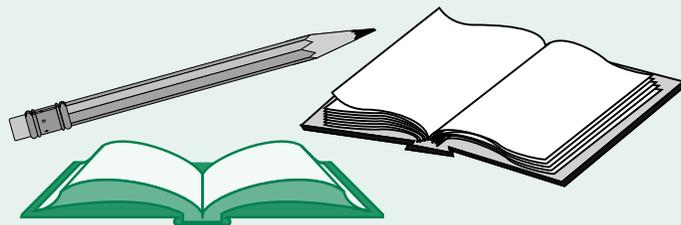
The club was formed four years ago with about a dozen students, several teachers and the town's recycling coordinator -- although students have been involved in the school's efforts to "green up" since 1994. At the end of lunch, all students sort their lunch tray and bag lunch leftovers into three separate barrels -- food waste for composting, drink boxes and milk cartons for recycling, and non-recyclables for the trash. After receiving a \$10,000 Toyota Tapestry grant in 1997 to purchase a commercial composter for the school, the town's recycling coordinator was able to expand the composting program to include two other schools. The club membership has grown over the years and the students have become environmental leaders at the school.

"Green Thumbs" is a play on words, not only referring to growing plants (out of the school's finished compost) but also the club's emphasis on caring for the earth. Green Thumbs students participate in fun activities that teach them the various aspects of sustainability and how to become environmental leaders.

The school recycles all of the mandatory items (glass and metal containers, cardboard and paper), plus #1, and #2 plastics, sneakers, inkjet and laser cartridges, fluorescent bulbs, computers, household batteries and cell phones. Club members visit classrooms to demonstrate how to correctly use recycling bins.

Other Green Thumbs activities include:

- Participating in the composting process -- screening



it, mixing it into potting soil, starting heirloom seeds in the spring and selling the plants.

- Creating gardens in various locations using the finished compost.
- Learning about toxic vs. non-toxic cleaning products and how to make a non-toxic cleaning solution.
- Holding events at the school to celebrate America Recycles Day (November 15th), such as a book swap and a "waste free" lunch.
- Helping distribute "welcome bags" to college students living in off-campus apartments. The bags contained coupons from local businesses and instructions on how to recycle at their apartment.

Green Thumbs has been recognized for its efforts by the DEP for their environmental initiatives. On three separate occasions, the club received DEP's Green Circle Award -- <http://www.dep.state.ct.us/pao/grncrc/greencircle.htm>.

For more information on Green Thumbs, please contact Mickey Maheu at Southeast School at (860) 423-1611 or maheumn@mansfieldct.org.

For a manual on how to establish a composting program at your school, visit DEP's website at <http://www.dep.state.ct.us/wst/compost/schmanual.htm>

or call (860) 424-3239.



WHAT'S NEW IN P2?

from the Connecticut DEP

Pitney Bowes Practices Sustainability

DEP has a new case study available that details how Stamford-based Pitney Bowes has put in place a number of innovative programs, including a product take-back program called Asset Recovery, an Energy Management Team, a Design for Environmental Quality program, and an ISO14001-certified Environmental Management System. As a result, the company has been reducing the amount of waste they generate; increasing recycling; conserving energy; purchasing clean, renewable electricity; and designing products to be more environmentally friendly. This case study is available by calling the DEP Office of Pollution Prevention at (860) 424-3297 or from DEP's website -- www.dep.state.ct.us/wst/p2/. Click on the "Business/Industry" link to see the entire list of available case studies of Connecticut companies. (continued pg. 6)

Lean, Clean AND Green

Opportunities for Businesses through the Green Suppliers Network

Running a business profitably and reducing the environmental impact of the manufacturing process are often perceived as opposing goals. But the Green Suppliers Network (GSN) focuses on helping small to medium size manufacturing suppliers work towards achieving those objectives through creative leveraging of a national network of technical assistance resources.

The GSN is a joint venture of industry, the U.S. Environmental Protection Agency (EPA), and the national network of Manufacturing Extension Partnerships. The GSN program utilizes the core tenets of Lean Manufacturing to foster bottom-line improvements with proven tools to decrease waste, use energy efficiently, reduce labor and capital costs with improved work practices, encourage the use of environmentally friendly materials and promote employee participation in the process.

The GSN program includes a top-level assessment with an estimate of cost saving opportunities; value stream and process maps to identify sources of waste; a facilitated opportunities session; and a final report with recommendations and cost benefit analysis.

EPA has committed financial support on a first-come-first serve basis for companies in the designated industries with fewer than 500 employees per facility. Designated industries include automotive, aerospace, office furniture and healthcare suppliers and will expand to appliances, consumer products and heavy equipment.

Companies who have experience with these technical assistance projects have documented a 4:1 return on their investment. The following opportunities were identified for two Connecticut metal finishers who participated in the aerospace pilot program:

- Company A – potential of \$274,000 in annual savings in Lean and Clean opportunities. Energy consumption reduction recommendations identified a 16% reduction in annual bills, \$77,752 annual savings.
- Company B – potential of \$982,000 in annual savings in Lean and Clean opportunities. Energy consumption reduction recommendations identified an 8% reduction in annual bills, \$94,958 annual savings.

Combining lean and clean manufacturing practices in programs such as the GSN program can raise the awareness of the relationship between lean and environmental performance and its potential to reduce the environmental footprint of manufacturing.

For more information on Clean Manufacturing and the GSN program, contact Judy Wlodarczyk, CONNSTEP, Inc., 860-644-9718 or jwlodarc@connstep.org or visit EPA's website at <http://www.epa.gov/p2/programs/gsn.htm>.

WHAT'S NEW? (continued from pg. 5)

Hospitals for a Healthy Environment

DEP's Office of Pollution Prevention recently became a Hospital For Healthy Environment (H2E) Champion. The responsibilities of a Champion are to assist H2E in their goals to eliminate mercury, minimize waste and reduce the use of persistent bioaccumulative toxic chemicals in health care facilities. The P2 Office will utilize the Connecticut Hospital Environmental Roundtable (CHER), created in April 2004 with Hartford Hospital to provide education and encourage information sharing among Connecticut hospitals. Fall activities included a P2/energy efficiency presentation at a CBIA seminar and a CHER workshop on hazardous and biomedical waste. Visit DEP's website at www.dep.state.ct.us/wst/p2/institutions/healthcare.htm for more information on both events, or call Nan Peckham or Connie Mendolia at (860) 424-3297.

Working Together for Cleaner Cleaners

The Connecticut Korean-American Dry Cleaners Association recently teamed up with the CT DEP to co-sponsor a workshop on environmental requirements and pollution prevention opportunities. The Association contacted DEP to request the workshop. As a result, DEP updated its fact sheets for dry cleaners into a Garment Care Industry guidebook, which includes information such as proper waste management and applying for remediation funding. The Sunday workshop was held on September 26th to accommodate the work schedules of the Association's members. DEP staff presented overviews of their programs and regulatory requirements. The Association translated two fact sheets into Korean and provided oral translation during the workshop. For a copy of the guidebook, visit DEP's website at <http://www.dep.state.ct.us/wst/p2/garcare/gcindex.htm> or call (860) 424-3297.

Up in Smoke!

It's no secret that the price of home heating oil and natural gas are on the rise, and this will surely impact us as we heat our homes this winter. Most of us will be looking for ways to balance comfort and cost, and some will look for alternatives to these fuels.

Wood is one alternative that seems to be getting people's attention. According to people in the wood stove and pellet industries, more and more people are turning to wood. From an environmental perspective, wood is a renewable resource that is produced locally, however air emissions from stoves can be a concern. **When using wood, it is important to use the proper type of wood stove and to burn only clean wood that has not been treated, painted or stained.** This will help minimize air pollution and associated negative health impacts.

There are a variety of indoor wood stoves on the market, some that burn cordwood and others that burn wood pellets. **The U. S. Environmental Protection Agency (EPA) requires all indoor wood stoves manufactured after the late 1980s to be certified to meet air emissions standards.** Certified stoves use either catalytic converters or have secondary combustion chambers so that fuel is burned more completely and the amount of air pollution is controlled.

Another wood burning technology that has recently hit the market is the outdoor wood-burning furnace (OWBF). Some of you may have seen these on display at agricultural fairs or at distributors in rural towns in Connecticut or throughout New England. An OWBF is a wood-fired boiler in a small shed with a smoke stack. Underground pipes carry water for heat and hot water. **Potential users of an OWBF should know that they have a big problem --- smoke!** OWBFs produce a lot of thick smoke, which in addition to being a nuisance to neighbors has serious health and air pollution impacts. The basic design causes fuel to burn incompletely in the combustion chamber, or firebox, and as a result, a lot of thick smoke is produced and is pushed out through a short smokestack directly to the outside air.

Smoke from OWBFs contains unhealthy amounts of particulate matter (PM), dioxin, carbon monoxide, nitrogen dioxide, sulfur dioxide, hydrochloric acid, formaldehyde and other toxic air pollutants. All wood smoke contains these pollutants, however, woodstoves that have been certified by EPA have control devices installed that ensure they burn much more completely and cleanly.

Exposure to PM in smoke can increase adverse respiratory and cardiovascular symptoms. Exposure to the other pollutants is associated with a diverse range of harmful health effects, including asthmatic sensitivity, lung illnesses and cancer. Studies show that children, the elderly and individuals with pre-existing cardio-respiratory diseases or diabetes are most at risk.

In Connecticut, DEP requires the smoke from combustion sources including OWBFs and woodstoves to meet strict opacity (smoke) limits. OWBFs, as well as older indoor woodstoves manufactured prior to the 1988 EPA regulations, are very likely to violate DEP regulations and



Smoke from outdoor wood-burning furnace

could result in fines and other enforcement actions. DEP is unaware of any currently manufactured OWBFs that are capable of being operated in full compliance with Connecticut's regulatory standards.

So, as you look for ways to stay warm this winter and also stay within your budget, clean alternatives to oil and gas may be something you'll want to investigate. Don't forget to consider the health and environmental impacts associated with each technology. If you think wood might be an option for you, check EPA's website for information on buying certified woodstoves at www.epa.gov/compliance/resources/publications/monitoring/programs/woodstoves/.

If you have questions regarding air emissions, contact DEP's Air Pollution Complaint Line at 860-424-3436. A fact sheet on OWBFs is available on the DEP website at www.dep.state.ct.us/air2/consumer/owf.pdf.

P 2 C A L E N D A R

A S E L E C T I O N O F E N V I R O N M E N T A L E V E N T S

1st week in February 2005
(exact date to be announced)
Green Building Tour
New Haven

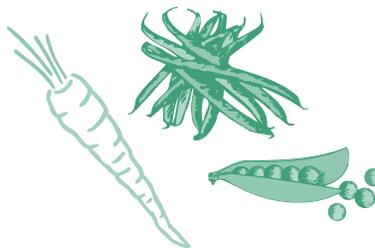
Tour Pfizer's brand new research facility that was constructed to LEED Silver standards. Sponsored by the CT Green Building Council. For more information or to register - contact Kim Trella at 860-424-3234 or kim.trella@po.state.ct.us.

February 8 - 16, 2005
Organic Land Care Course,
New Haven

An intensive five-day course based on the Northeast Organic Farming Association (NOFA) Standards leading to an accreditation as an Organic Land Care Professional. Contact CT NOFA for more information at 203-484-2445 or www.ctnofa.org/calendar/index.php.

March 16 and March 20, 2005
Organic Garden Planning,
New Haven

A two session workshop for beginning to intermediate gardeners interested in growing vegetables, flowers, herbs, and perennials using organic techniques. The workshops cover compost, soil, bed preparation, garden layout, seeds, seed starting, and transplanting. Contact New Haven Ecology Project for more information at 203-389-4333 or <http://www.nhep.com/springweekends.htm>.



March 29, 2005
Community Forum on
Alternatives to Landfills
Hartford

Join the Hartford Neighborhood Environmental Partnership, a coalition of Hartford groups, at its second community forum on the Hartford Landfill. The topic of this forum will be alternatives to landfills and will include information about the upcoming closure of the Hartford Landfill, technologies such as plasma conversion, and actions residents can take to reduce their own trash burden. For information on location and snow date, check: www.hartford.gov or call Mary Sherwin at 860-424-3246.



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127
www.dep.state.ct.us
Gina McCarthy, Commissioner

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