

Still more can be done to reduce plastic water bottle waste. States could pass laws requiring bottled water producers to use recycled content in their plastic bottles. According to the National Association for PET Container Resources (Sonoma, California), six of the twelve plastic bottle reclamation plants in the U.S. have received letters of non-objection from the federal Food and Drug Administration (Washington), allowing the RPET produced to be used in direct contact with various food and beverage products, yet only a fraction of PET bottles sold (less than three percent) are used to make new plastic bottles.

The paucity of closed-loop recycling means that new water bottles must be manufactured almost entirely from virgin petroleum resin, consuming vast amounts of energy and resources. Increasing the quantity of bottles containing recycled content would greatly reduce energy usage, greenhouse gas emissions and pollution.

Two years ago, the Coca-Cola Co. (Atlanta) committed to using recycled content in 10 percent of all its plastic beverage bottles sold in North America. Soon after, PepsiCo (Purchase, New York) committed to using 10 percent recycled content in its plastic soft drink and water bottles sold in the U.S. Although both Coke and Pepsi met their recycled content goals in 2005, Coke has withdrawn its commitment. Other bottled water producers are silent on the issue.

The broken link: Collection infrastructure

Not only energy and material resources are being wasted when PET bottles are not recycled, but the opportunities to grow businesses also are lost – homegrown businesses, businesses that convert scrap PET bottles into clean flake and businesses that convert clean flake into strapping, carpet, new bottles and other recycled products.

Unfortunately, with the current infrastructure for collecting PET bottles – container deposit systems in 11 states, 9,000 curbside programs and thousands of drop off centers – fewer than one in five PET water bottles are being collected. The broken link between post – consumer PET bottles and plastics processors is the lack of an adequate collection infrastructure.

First, nearly half of the U.S. population does not have access to curbside recycling and probably never will. These include individuals and families who live in very rural areas or in apartment buildings. Even in communities served by a curbside program, not everyone participates. But even if every family in America had access to curbside recycling and participated, water bottles are much more likely to be consumed in hotels, offices, schools, during

sporting events and at outdoor activities. Thus, this material would not likely make it into the curbside bin. Container recycling in commercial buildings is scarce, and recycling at sports, entertainment venues, parks and beach areas has proven extremely challenging.

Plastic water bottle waste: A national disgrace

More than 30 billion plastic water bottles will be landfilled or incinerated in the U.S. this year. Hundreds of millions more will clog the streams and tributaries feeding America's rivers. Bottles not contained by fallen trees and other debris along our inland waterways will float out into the Atlantic and Pacific Oceans.

Plastic bottle waste is not just a national problem, it is a national disgrace. Without a nationwide system of deposits, expansions of existing deposit laws, and some new collection infrastructure efforts, America faces a growing mountain of plastic bottle waste with all of the resulting social and environmental consequences.

Further Information

Bottled Water: Pure Drink or Pure Hype, Natural Resources Defense Council
www.nrdc.org/water/drinking/bw/bwinx.asp

Plastic Water Bottle Waste
www.container-recycling.org/plasfact/drinkingwater.htm

Sierra Club's Bottled Water Campaign
www.sierraclub.org/cac/water/bottled_water/

Water Rights Project
www.polarisinstitute.org/polaris_project/water_lords/water_lords_index.html

Water, Water Everywhere: The Growth of Non-Carbonated Beverages in the U.S.
www.container-recycling.org/assets/pdfs/reports/2007-waterwater.pdf

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PHOENIX QUARTERLY

October, November, December 2007

Warning: Non-traditional Newsletter!

We decided to get off the soapbox and loan it to someone else for a change. One of the leading recycling magazines recently published an article about the explosion of bottled-water sales and the correlating effect on waste. It is not the lightest reading, but we figured that there are enough people out there that would enjoy a more analytical look at recycling to reprint the article. We hope you enjoy some trashy reading! We do.

Hats off to San Francisco Mayor Gavin Newsom: who recently signed an executive order banning the use of city funds to purchase single-serving plastic water bottles. This very public action represents a big first step to reduce this unnecessary waste. He explained his position by pointing out that unlike juice or sodas, water is available for 1/300th the price from the tap, tap water produces almost no waste, and is often cleaner than so called "pure" bottled water. His action should save the city \$500,000 annually.

Water, water everywhere

Reprinted with permission from *Resource Recycling*; June 2007.
By Pat Franklin. www.resource-recycling.com

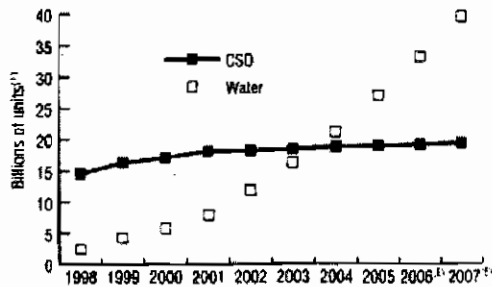
Water, the oldest liquid on earth, is the biggest selling, fastest growing new-age drink on the market. Packaged almost exclusively in plastic bottles made of polyethylene terephthalate (PET), the ubiquitous water bottle has experienced unprecedented growth during the past decade. Package sizes range from six ounces to five gallons, but 90 percent of water is sold in single-serving bottles of less than one liter.

Health-conscious Americans consume water from disposable plastic bottles at a rate of more than 78 million bottles per day. For most consumers, bottled water simply provides an opportunity to hydrate on the go, wherever they go.

While carbonated soft drinks (CSD) remain the top selling packaged beverage, sales of CSDs in single-serving plastic bottles were surpassed by bottled water in 2004. By 2005, bottled water sales had grown to nearly 27 billion containers, while soda bottle sales were just under 19 billion. At current growth rates, twice as many single-serving plastic water bottles will be on the market as carbonated soft drink bottles in 2007 – 39 billion versus 19 billion (see Figure 1).

Even though they are purchased in bulk and taken home, bottled water in sizes less than one liter are generally consumed away from home, and are more likely to end up in a trash can than a recycling bin.

Figure 1 Growth in plastic carbonated soft drink and bottled water sales: 1998-2007



(1) Under 2 liters.
(E) Estimated.
Source: Beverage Marketing Corp., 2006.

The price we pay to hydrate

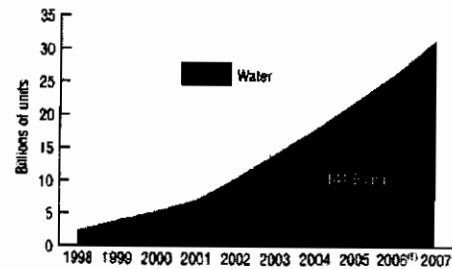
Most Americans pay a monthly water bill for municipal tap water, at an average cost of \$2 per 1,000 gallons (a fraction of a cent per gallon), according to the American Water Works Association (Denver). Filtering tap water by

means of a device installed under the kitchen sink brings the cost up to about \$0.10 per gallon, and a tabletop filter increases the cost to \$0.25 per gallon. Bottled water, on the other hand, can cost as much as 10,000 times more than tap water, according to the AWWA. But the price consumers are paying for the bottled water itself pales in comparison to the price paid for the environmental consequences of drilling oil, manufacturing and transporting new bottles, and the disposal of used bottles. The Earth Policy Institute (Washington) estimates that making bottles to meet the U.S. demand for bottled water requires more than 1.5 million barrels of oil annually, enough to fuel 100,000 cars for a year. Transport and disposal of the bottles adds to the resources used, and water extraction – which is concentrated in communities where bottling plants are located – adds to the strains bottled water puts on our ecosystem.

Plastic water bottle waste has mushroomed

Unprecedented growth in the U.S. bottled water sales is matched by unprecedented growth in plastic bottle waste. The number of single-serving plastic water bottles wasted (not recycled) has mushroomed from an estimated 2.3 billion in 1995 to more than 22 billion in 2005 – a 900 percent increase in just ten years. By the end of 2007, more than 100 billion plastic water bottles will have been sent to landfills and incinerators in just the past five years (see Figure 2).

Figure 2 Plastic water bottle waste: 1998-2007



(E) Estimated.
Source: Beverage Marketing Corp., 2006.

Lacking published recycling data for water bottles, these figures are arrived at by assuming that PET water bottles are recycled at the same rate as custom PET bottles. It is known that CSDs are recycled at rates more than twice the rate of PET custom bottles, because for 15 years the American Plastics Council, now the American Chemistry Council (Washington), broke out the annual PET sales and recycling data into two categories: CSD and custom PET. The ACC discontinued this practice in their 2005 report,

but since the volume of CSD bottles sold declined and bottles recycled increased in 2004 – resulting in an increase in the 2004 recycling rate – it seems safe to use the 2004 recycling data in determining the CSD recycling rate for 2005.

According to the ACC, the 2004 recycling rate was 33.7 percent for CSD and 14.5 percent for PET custom bottles. CSD PET enjoys a higher recycling rate than custom PET, because plastic soda bottles that require a refundable deposit in 11 states are recycled at rates ranging from 45 percent in California, where the 2005 refund value was four cents each (it was changed to five cents in January 2006) to 95 percent in Michigan, where the refund value is a dime. In the other nine states where the refund value is a nickel, the redemption rate ranges from 68 percent to 80 percent, but the recycling rate is higher when containers recycled through curbside programs are included.

The 2005 custom PET bottle data can be derived using the 2004 CSD sales and recycling data, as well as 2005 data for all PET bottles. Under these assumptions, the recycling rate in 2005 for PET water bottles was 17.6 percent.

Table 1 PET bottle recovery rate (In percent)

PET bottles	2004	2005
CSD	33.6	33.6(E)
Custom	14.5	17.6 (E)
All bottles	21.6	23.1

(E) Estimated percentage, Source: American Plastics Council, 2006

Stem the growing tide

This year, assuming the water bottle recycling rate moves up a couple of percentage points, close to 20 percent of the plastic water bottles sold will be recycled, while the other 80 percent will be trashed. These numbers could be reversed within two years with a national law requiring refundable deposits on all bottled water. Plastic soda bottles are being redeemed at around 70 percent in most states with a nickel deposit. Another 10 percent or more are being recycled through curbside recycling programs in those states; there you have it, 80 percent recycling and 20-percent wasting.

But do lawmakers have the political will to pass laws that would guarantee such a reversal? Connecticut, Massachusetts, New York and Oregon are considering legislation that would update the deposit laws to include bottled water, which did not exist when the original laws were passed. If all four states were to put a nickel deposit on water bottles, the amount of scrap PET available to reclaimers would grow by an estimated 100 million pounds.

New York City Taxis to cut emissions by 215,000 tons

An aggressive plan to annually convert all of the yellow taxis operating in the city to hybrid technology by October 2012 is expected to cut carbon emissions by 215,000 tons annually and eventually more than double gasoline mileage.

The push to hybrids unveiled last week by Mayor Michael Bloomberg is part of the city's long-term sustainability goals outlined in PlaNYC.

Making changes to the taxi fleet can have a major impact, as more than 13,000 yellow taxis operate in the city.

Because of their heavy use, switching all of those taxis to hybrids will have the same environmental impact as removing more than 30,000 vehicles from New York City streets, the city said.

"By turning our yellow cabs green, we can put New York City miles ahead on the road to clean air," said the President and CEO of the American Lung Association of the City of New York.

"Our passenger numbers will go up because people are very environmentally conscious." "I believe in the short term it may cost the industry some money, but in the long haul the move will save more cash."

"Aside for the long term financial benefits, the environmental benefits of hybrid taxis are more important."

From Waste News May 28, 2007

Earthrace (www.earthrace.net) is the world's first major powerboat record to be attempted using only alternative fuels. The boat is powered by 100% biodiesel, a fuel made from plant matter and animal fats that produces low emissions and is biodegradable. Equipped with two low emission diesel engines, and built with high tech composite materials used in military aircraft, the boat has a unique wave-piercing hull designed to slice through waves.



Tips for Recycling Debris Resulting from Wildfire Mitigation:

Did you know that wildfire is southwest Colorado's greatest natural disaster threat?

Maintaining defensible space around your home improves your safety. Phoenix Recycling has teamed up with the Firewise Council of Southwest Colorado to remind land owners that natural material accumulated by creating defensible space does not have to end up in landfills.

Since maintaining defensible space around your property requires you (or someone you hire) to thin and remove trees and shrubs within 75' to 100 feet from your home, and to clear your roof and gutters, debris is inevitable. Here are some creative ways to "re-use" the material:

1) Recycle it by hiring someone to chip it. Then use it as mulch and ground cover on your property, around trees and in gardens

2) Some local governments, such as the City of Durango, have clean up days/weeks and create their own mulch. Dry yard waste can also be dropped off at the Bayfield Convenience Center.

3) Use the smaller material in your compost pile (e.g. leaves).

4) Bookmark and use the local Web Site: www.southwestcoloradofires.org.

This is a clearinghouse site maintained by the Colorado State Forest Service, San Juan Public Lands Center (USFS/BLM), and the Office of Community Services at Fort Lewis College



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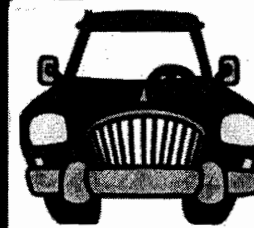
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PHOENIX QUARTERLY

July, August, September 2007

GAS
Reg: Arm
Prem: Leg
Sup: First
Born



Summer's Here!!!

Just a reminder: Service days
will not change for the
4th of July and Labor Day.

HOUSEHOLD CHEMICAL COLLECTION DAY!

When: Saturday, September 29th, 2007

Where: La Plata County Fairgrounds

Time: 8:30 a.m. – 2:30 p.m.

Cost: \$10 donation

For More Information Call: 375-4831

Bring Your Household Hazardous Waste Including...

Cleaning Supplies, Painting Supplies, Indoor Home Supplies, Garden Supplies, Automotive Fluids, Home & Car Batteries, Hobby Supplies, Pharmaceuticals

If possible, bring products in their original containers. **DO NOT MIX!**

Make sure containers are properly sealed.

Do Not Bring...

Explosives

Electronics

Business Waste

Visit:

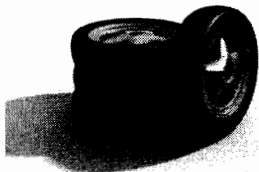
<http://www.durangogov.org/resident/services/recycling.htm> for other recycling opportunities.

No Tires Accepted!

Effective July 1, 2007, it is illegal to dispose of residentially generated tires, batteries and auto fluids at Colorado landfills.

Instead, please trade in old tires when you buy new ones, and visit

<http://www.durangogov.org/resident/services/recycling/recipients.cfm> to learn where you can take your automotive fluids and batteries to be recycled on a regular basis.



GOVERNOR SIGNS COLORADO'S FIRST MAJOR RECYCLING BILL

The Sustainable Resource Economic Opportunity Bill(HB1288) passed successfully through both the House and the Senate and was signed by Governor Ritter Wednesday May 24, 2007. The bill will help further all types of recycling and waste diversion in Colorado, and will also allow the Colorado Department of Public Health and Environment (CDPHE) to better support waste diversion activities.

Web sites for legislation tracking and research on recycling issues:

- www.govtrack.us – Federal Law and Legislation Tracking
- www.law.cornell.edu/states/listing.html - Cornell Law School State Legislation Tracking
- www.earth911.org – Earth 911
- www.cafr.org – Colorado Association for Recycling
- www.bottlebill.org – Recycling Legislation Research and Tracking
- www.firstgov.gov – General Governmental Law and Legislative Research.

What is Green Building?

If you have been wondering what Green Building is all about, here are some benefits to consider when constructing or renovating your home.

- Well insulated attics and walls reduce energy loss and save money.
- Sun tempered or E Windows reduce cold zones to save energy and money.
- Fiber cement siding, compost or recycled content decking and more durable roof material increase durability and reduce frequent maintenance.

- Advanced air sealing and moisture barriers in walls improve energy efficiency and reduce possible long term moisture problems.
- A sealed garage protects the house from combustion gases, and carbon monoxide.
- Insulated exterior doors save energy dollars and improve comfort.
- Irrigation systems can be designed to eliminate over or under watering, also save water and money.
- Extended drain spouts that direct water at least 5 feet from the house helps to protect the foundation from water damage.

For more information on Building Green visit:

<http://www.builtgreen.org>

<http://www.builditgreen.org>

<http://www.lowimpactliving.com>

<http://globalgreen.org>

Also visit the Green Expo at the La Plata County Fairgrounds October 19th and 20th, 2007.





Hollywood Environmentalism

Those inside the entertainment industry gathered recently to celebrate their shrinking environmental footprints. At the first Hollywood Goes Green conference, those in attendance heard about how Evan Almighty had neutralized its carbon emissions and how the 2007 Academy Awards had been "greened" all the way down to the recycled toilet paper. Pitches were made for ecofriendly reality shows. Later in the evening, the fate of the world was debated over organic vodka cocktails mixed in bicycle-powered blenders. Being environmentally friendly has a great deal of appeal to an industry that seeks publicity for the good things it does but is sensitive about accusations of limousine liberalism and green-washing. A UCLA study done in 2006 found that the TV and movie business is one of the largest producers of air pollutants and carbon emissions in Los Angeles, mostly due to transportation. However, Hollywood also is interested in "Greening Up" because it's profitable. With the green ad market estimated at as much as \$3.5 billion this year and the green products market being placed at \$200 billion, nobody wants to turn away consumers who are looking for ways to live an earth-friendly lifestyle. As author Dave Gilson says, Hollywood's opinion is that the usual "environmentalist message that we have too much stuff needs to be recycled into the message that we actually just have the wrong stuff. We will shop our way back from the brink of global destruction one compact fluorescent bulb at a time." Of course, Hollywood would rather put green themes into the

old reliable formats such as reality TV, home improvement shows, and sit-coms. Which is why Planet Green has asked Leonardo DiCaprio to produce The Greensburg Project, a multi-part series that follows the sustainable reconstruction of a Kansas town destroyed by a tornado. If environmentalism is truly in need of a makeover, then who better to do it than an ally with the power to shape public opinion, and with deep pockets filled with money? By unfettering environmentalism from its old stereotyped image, it's conceivable that a souped-up biodiesel Chevy Impala on Pimp My Ride will bring ecofriendly ideas to viewers who might otherwise never be exposed to them or would ignore them as fringe. That doesn't mean that consumer-driven environmentalism will solve all our problems, but it would be rather one end of an increasing array of approaches in the environmentalist spectrum.

From: www.motherjones.com/arts/feature/2008/03/hollywood-ecotainment-green.html

News From Fort Lewis College

The Environmental Center at Fort Lewis College reported in February that they have a Blue Bin Program in the works. The Zero Waste Team has decided to try to pull together a pilot recycling program for the resident halls next year. The idea is to purchase small blue recycling bins with custom-made stickers and to give them out to students that want them and collect a deposit. Distributing the bins will get more students to come to the Environmental Center and provide an opportunity to educate more students about recycling.



PHOENIX QUARTERLY

April, May, June 2008



Phoenix Recycling LLC 375-1300
P.O. Box 2882 Durango, CO 81302

Local Recycling; Where does it go?

In a recent survey, many of you expressed interest in knowing what happens to your recyclables after we pick them up. Most residential recycling is taken to the Durango Recycling Center. From there, it goes to different places and uses depending on the recycling group, though all recyclables are prepared at the Durango Recycling Center and sent directly to mills to be reprocessed.

Recycled paper is sent to a mill in Arizona, which uses it to create newspaper. The places the plastics are sent to often vary depending on price, though they are often sent to California, and are used to make many different things such as carpeting or fleece, or even new plastic bottles. This is why it is important that we can only take plastic bottles; only certain types of plastic can be reused in this way.

A portion of the clear and green glass that is recycled here is turned into gravel or sand-sized pieces that are rounded for safe handling. This gravel is sold locally for landscaping purposes. The brown glass is sent to Coors Brewing Company to be remade into beer bottles. Aluminum is also sent to Coors, to be made into beer cans. Cardboard is sent to New Mexico, where it is made into new cardboard. Any steel that is brought in is usually either sent to foundries in the Midwest, or to Pueblo, Colorado to be melted down and reused.

Many thanks go to Nancy Andrews of the Durango Public Works Department for much of the information that was used in this article. Further information was obtained from the city's website, www.durangogov.org.

Electronics Recycling

Coming up this spring, the Durango Recycling Center will be holding a two-day electronic recycling event. The event will be held on Friday, April 25th and Saturday, April 26th. On these two days between 9:00am and 3:00pm you can bring your electronic equipment to the Durango Recycling Center at 710 Tech Center Drive to safely dispose of it. There will be a fee of \$5 for CPU's, printers, faxes, and scanners. For Monitors, laptops, and TV's up to 27 inches, the fee will be \$15. The fee for TV's over 27 inches will be \$25. All other electronic equipment will be free of charge. This event is held twice a year, and will be held again in the fall.

It is important not to miss this event if you have any electronics to be recycled. Electronics can contain any number of toxic materials, such as lead and mercury in their circuit boards, or even in their glass components. In Colorado, the law strictly regulates the disposal of electronics equipment by businesses and other public agencies such as schools. In some other states, laws ban even residential dumping of electronics.

<http://www.cdphe.state.co.us/hm/electronics/>
http://www.etakeback.org/docs%20open/Toolkit_Legislators/state%20legislation/disposal%20bans.htm

Be Bear Smart

Pretty soon it will be spring and bear season once again, so be sure to take the proper precautions when taking out your trash can. Bears will be waking up from their winter hibernation ravenously hungry, and your trash will seem like a bear-buffet. Bear activity will be especially high if there are any late spring frosts, because these kill the buds on

trees and bushes, meaning there will be fewer berries and fruits for bears to forage upon.

Don't leave your trash out overnight; bears are mostly nocturnal, so with fewer people out and about, this is a prime time for them to seek food. If your trash is out it's likely that a bear will try to get into it. Keep your can in a garage or shed, and only put it outside on the day your trash is to be collected. The same goes for your recycling.

Phoenix's trash cans also come equipped with Critter Locs to make our cans bear-resistant. This will help keep bears out, but bears are quite ingenious at breaking into cans, so please take the precautions already mentioned.



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Greening Your Lawn

A lawn is a great summer treat. Besides bare toes on the grass and satisfaction from the glory of natural green shimmering in the sun, a lawn needs tender loving care. So how do you add environmentalism to your green thumb? Here are some ideas:

- Improve mowing efficiency. Mowing the grass is a source of greenhouse gas, but it doesn't have to be. Gasoline powered lawnmowers create tons of CO₂. To reduce CO₂ sharpen your mower blades. If you are looking to buy a new mower, consider an energy efficient electric or propane powered mower, or a human powered mower.
- Raise your blades to about 3.5 inches. Longer grass retains moisture and shades out weeds.
- Test your dirt. Healthy soil is naturally capable of repelling bugs, weeds and disease. Soil can be tested for pH, nitrogen, phosphorus and other elements to keep dirt fertile and naturally pest-resistant. Soil test kits can be purchased at nurseries and hardware stores.
- Don't use poisons. Poisons kill helpful creatures like bugs, birds and microbes. They also expose you and your family to potentially harmful chemicals. Try organic alternatives to poisons such as adding beneficial bugs or soil amendments.
- Don't toss your grass cuttings. Leave them on the lawn or find a secluded corner where they can decompose naturally.

Ongoing Children's Exhibit: "Living Off the Land"

What: This unique exhibit at the Children's Museum of Durango educates children about the Rocky Mountains ecosystem, food products generated by local ranches and farms, the benefits of growing organic, the effects of carbon footprints, and the importance of recycling.

Where: Durango Children's Museum located at 802 East Second Ave.

When: Open from 10 AM to 5 PM Wed-Fri and 1-5 PM on Sat and Sun

For more information: Call 970-259-9234

Toyota Sells Its One Millionth Prius

The Prius has been on the market since 1997 but it didn't cross the ¼ million mark until 2004. Just two years later it doubled to ½ million and two years after that it doubled again to 1 million cars. With the rising popularity of the car and soaring fuel costs, Toyota hopes to sell one million each year after 2010.



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PHOENIX QUARTERLY

July, August, September 2008

Recycled Wood Mulch

Green Lawns

A Prius Posse

7 Billion Trees

children Living off The Land

Goal: 7 Billion Trees

OSLO, a worldwide tree planting drive, set a goal of planting 7 billion trees by late 2009. This represents slightly over one tree for each person on the planet. By the end of 2007 governments, companies and individuals had planted over 2 billion trees. If

OSLO is successful, the goal will exceed the UN's Kyoto Protocol. The UN Environment Programme (UNEP), an organizer of the tree planting drive, said planting and safeguarding trees were among the most cost-effective ways to slow climate change. Trees soak up carbon dioxide as they grow, removing it from the atmosphere. Deforestation is blamed for over 20% of humankind's total carbon footprint. Governments organized the biggest plantings. Ethiopia leads the planting with 700 million trees followed by Turkey at 400 million and Kenya at 100 million. The U.S. and China produce the most carbon dioxide, followed by Russia. Seven billion trees would soak up the same amount of carbon dioxide produced by Russia as they grow.



Recycled Mulch Now Available

Phoenix's mulch is now available to the general public at Snowcap Sod. This partnership enables local homeowners to purchase this product by the cubic yard. The mulch is a natural light brown color and is perfect for use around bushes and tree transplants, as a ground cover, for walking paths, and for erosion control.

FAQs

What are the benefits of using mulch? Applying mulch helps control weeds and retains water in the soil to support plant growth.

What color is it? The mulch is light colored when it is first produced like freshly cut wood. Over a short period of time it darkens to a light brown color as it is exposed to sun and rain.

Can I see what aged mulch looks like? Three Springs has been a big supporter of Phoenix and has used our mulch for landscaping. The mulch in the median strip between the highway and the first roundabout as well as the mulch around the transplanted trees along the sides has weathered for about one year. You can check it out the next time you are in the Three Springs neighborhood.

Why is it "recycled" mulch? Phoenix Construction Recycling recycles construction waste including scrap wood. Dimensional lumber, engineered wood and pallets are ground up and screened to produce a quality product that otherwise would have ended up in a landfill.

Is it safe to make mulch out of engineered wood? Yes. The science is too involved to be

summarized here, but you can get more information at: <http://www.toolbase.org/PDF/CaseStudies/Reusewoodreport2004.pdf>

What about chemically treated wood? All of our mulch is made from hand-sorted wood that does not include chemically treated wood. Unprocessed waste is placed in our sorting area where Phoenix employees remove the recyclable materials by hand. It is a labor-intensive process but it allows us to tightly control what we grind. Any chemically treated wood is disposed of and not processed into mulch.

Are there any other benefits? Absolutely!

- The mulch is made from a waste product that otherwise would have been buried in a landfill. Landfilled organics release methane, a very potent greenhouse gas, into our atmosphere.
- This mulch is produced and consumed locally, dramatically reducing the transportation costs, both economic and environmental.
- Recycling creates jobs. Recycling waste creates seven jobs for every one job at a landfill.
- Phoenix is locally owned and operated. Our landfills are not.
- This mulch is one of the best deals around. Shop around and you'll agree.

Where can I get this mulch? Snowcap Sod is located at 12639 Hwy 550, 5 miles south of Farmington Hill on the West side of the highway. They are open Mon-Fri 8-5 and Sat 8-12. Snowcap Sod can be reached at 247-1055.

Green-Speak: Are You in the Know?

In the current prolific language of 'going green' we've all heard the buzzwords that are increasing our awareness of environmental responsibility—alternative energy, energy efficient, biodegradable, hydroelectric, and wind power. We've found some however, you may not be as aware of:

Upcycled: Refers to waste materials that are recycled into something of greater value or use.

Biomimicry: A new design strategy that seeks to observe nature and emulate its best ideas, especially when it comes to waste reduction and limiting environmental impact.

Cradle to cradle: A phrase brought into the mainstream by William McDonough and Michael Braungart in their book "Cradle to Cradle: Remaking the Way We Make Things" (North Point Press, 2002); refers to manufacturing processes that are efficient and practically waste-free.

Hypermiling: The practice of maximizing mileage during driving. Best practices include not speeding, only accelerating when you have to, and using your car's cruise control when you're on the highway.

100-mile diet/localterian: The purchase and consumption of food that is grown, produced, or manufactured within a 100-mile radius of where you live.

Negawatt: A measure of energy efficiency that refers to a megawatt of power avoided or saved.

Greenwashing: The practice of making misleading or unsubstantiated claims about the environmental benefits of a product or service.

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Wild Mushroom Hunt

This fall many of you will be trekking into the wild to seek out mushrooms to tempt your culinary skill—but please do not eat a wild mushroom until you are 100% sure it is safe. Even then, experts recommend testing with small portions to ensure there are no allergic reactions. Now test your ability to spot them in this puzzle, and you just might spot a few in the forest.

C R A C K E D R U S S U L A N F U N V P
 K F A I R I E S B O N N E T S I Q I X E
 D R A T S U C D N A S M U L P E O O A P
 S U G N U F T H G I N K W O L L E Y N P
 A T A L U S S U R E S O R O E D T S I E
 F H T A W N Y G R I S S E T T E E P S R
 F C G O E T E L O B D I C S I V L A E Y
 R E S U I R A N I T R O C D E R O C E M
 O E E T E L O B H C R A L A Z C B T D I
 N B S U L P H U R T U F T O Q A S E C L
 M Y R E W O L F I L U A C T X E L V L K
 I M O E H H O N E Y F U N G U S I L I C
 L I H C I R A G A Y L F P N L A V E T A
 K L C C I R A G A S I R G I D R E V O P
 C S P R I N G W A X C A P P G S D X Y L
 A Y N U T E K C A R B G N I H S U L B U
 P A S L E G N A G N I Y O R T S E D E T
 S C A R L E T E L F C U P G G H X A M E
 F D B R E N R U B L A O C R A H C A R U
 L O S A R A P A C X A W N O S M I R C S

aniseed clitoybe
 blushing bracket
 caesars
 cauliflower
 charcoal burner
 cracked russula
 crimson wax cap
 destroying angel
 devils bolete
 griping toadstool
 honey fungus
 horse
 larch bolete
 parasol
 peppery milk cap
 pigs ear
 plums and custard

pluteus
 scarlet elf cup
 slimy beech turf
 spring wax cap
 sulphur tuft
 tawnt grissette
 velvet cap
 verdigris agaric
 violet cortinarius
 faries bonnets
 field
 fly agaric
 red cortinarius
 rose russula
 saffron milk cap
 viscid bolete
 yellow knight fungus



PHOENIX QUARTERLY

October, November, December 2008

Holiday Schedule

If your service day is on Thursday, pick-up will be on Friday after the following holidays:

- Thanksgiving
- Christmas
- New Year's Day

Phoenix would like to extend warm wishes to all for a great holiday season!

Before you toss out those batteries....



Battery Disposal Guidelines:

With the growing variety of batteries on the market today—including what will be required to power Santa's bounty in the upcoming season—it can be somewhat daunting to know how to dispose of them safely when they wear out.

According to Environment, Health, and Safety Online (EHSO), all batteries are not created equal. Some can be tossed out in normal trash and some cannot. Use the following guide and recycle whenever possible.

Battery Type	Common Name	Examples of Use	Disposal classification
Alkaline (manganese)	Coppertop, Alkaline	Flashlights, calculators, toys, clocks, smoke alarms, remote controls	Non-hazardous waste. May be put into trash (normal municipal waste), but may also be recycled at local depositories (see "Year-Round Battery and Cell Phone Recycling", facing page).
Reusable Alkaline Manganese (Rechargeable)	Renewal	Flashlights, calculators, toys, clocks, radios, remote controls	
Carbon Zinc	"Classic", Heavy Duty, General Purpose, All Purpose, Power Cell	Flashlights, calculators, toys, clocks, smoke alarms, remote controls, transistor radios, garage door openers	
Lithium / Lithium Ion	Usually has "lithium" label on the battery	Cameras, calculators, computer memory back-up, tennis shoes	Recyclable (See facing page)
Nickel Metal Hydride (Rechargeable)	Either unlabeled or labeled "Ni-Li" or "Ni-Hydride)	Flashlights, toys, cellular phones, power tools, computer packs	
Button	Mercuric Oxide, Silver Oxide, Lithium, Alkaline, Zinc-Air	Watches, hearing aids, toys, greeting cards, remote controls	Hazardous waste. Bring to a household hazardous waste collection site, such as the event hosted twice annually by the Durango Public Works Department. (See facing page)
Nickel-Cadmium (Rechargeable)	Either unlabeled or labeled "Ni-Cd"	Flashlights, toys, cellular phones, power tools, computer packs	
Sealed Lead Acid (Rechargeable)	"Gel," VRB, AGM, Cyclone, El Power, Dynasty, Gates, Lithonia, Saft, Panasonic, Yuasa	Video cameras, power tools, wheelchairs, ATV's, metal detectors, clocks, cameras	
Silver Oxide	Panasonic Silver Oxide	Watches, hearing aids, toys, greeting cards, remote controls	Hazardous waste. Take back to place of purchase. Most places that sell car batteries will also accept them for recycling.
Lead Acid Vehicle Batteries	Autozone, Sears Die Hard, Yuasa	Cars, trucks, motorcycles	

Electronics Recycling

The City of Durango is sponsoring a 2-day electronics recycling event this fall.

November 14 & 15

**Durango Recycling Center
710 Tech Center Dr.
9:00 am – 3:00 pm**

Components found in computers, CRTs, and televisions contain significant amounts of lead, chromium, silver, and other toxic materials.

Recycling electronics helps keep hazardous materials out of our landfills, and is required by law for businesses, governments and schools. A fee is required for some items:

- CPU, desktop printer, scanner, fax machine \$5
- Monitor, laptop, TV up to 27" \$15
- TV over 27" \$25
- Large office equipment (copier, all-in-one plotter, etc.) \$0.25/lb
- Keyboard, mouse, cables, power cords: No Chg.
- Other electronics (cell phone, digital camera, camcorder, CD player, Gameboy, No Chg.
- Inkjet cartridge, laptop, cell phone battery No Chg.

Year-Round Battery and Cell Phone Recycling

- Radio Shack: 1020 Main Ave.
- Hensley Battery: 360 S. Camino del Rio
- Kroeger's Ace: 8 Town Plaza
- ALLTEL: 82 Bodo Park
- Office Depot, Inc.: 331 S. Camino del Rio

Paper nor Plastic

Eschew plastic bags by bringing your own reusable canvas totes the next time you're at the supermarket or store.

Because petroleum-based plastic isn't biodegradable, it's certain to outlive you-by about a millennium or so. Each year, thousands of marine animals, including the endangered leatherback turtle, choke to death on plastic trash they mistake for snackable morsels.

Our unholy love for plastic disposables has also bred a swirling vortex of plastic trash the size of Texas in the North Pacific Ocean-not surprising when you consider that Americans run through about 100 billion plastic bags annually, using an estimated 12 million barrels of oil.

Reprinted from *Live Science*.

Did You Know?

The U.S. Postal Service has begun offering paper recycling in post office lobbies, helping those with P.O. Boxes to recycle unwanted mail items. The "Read, Respond, Recycle" bins are presently available at over 4,000 domestic sites.

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Quiz Yourself on Environmental Facts

Here's some fun to test your environmental acumen.

1. On average, how much trash did each American create in 2005 after recycling?
a. 600 lbs b. 700 lbs c. 800 lbs d. 900 lbs
2. What is the biggest source of human-made greenhouse gases in the U.S.?
a. automobiles
b. electrical power plants
c. factories
3. How much cooler (in degrees Fahrenheit) would the earth be right now, if there were no greenhouse gasses?
a. 20 b. 40 c. 60 d. 80
4. How much coal would you have to burn to equal the potential energy in one pellet of Uranium?
a. 330 lb b. 1012 lb c. 1780 lb d. 2150 lb
5. How much energy in coal is lost when it's burned for electricity?
a. one-third b. half c. two-thirds
6. What percent of the earth's water is drinkable?
a. 0.5% b. 2% c. 23.2%

Answers

1. d. American dumped 133 million lbs of trash in landfills in 2005, which works out to about 900 lbs per person.
2. b. the generation of electricity produces about a third of all greenhouse gases in the U.S.
3. c. life would be much tougher without them.
4. c. It also equals 17,000 cubic feet of natural gas, or 149 gallons of oil.
5. c.
6. a.



PHOENIX QUARTERLY

January, February, March 2009



"It is less difficult to separate garbage than to find a new habitable planet."
- Lucy Hawking

The Cycle of Sustainability

As environmentally conscientious citizens you recycle your plastic bottles, placing them into bins and setting them at the end of your driveways for pick-up – but have you ever wondered what shape they may take in their next life.



Ninety percent of recycled plastic falls into two categories:

- **PETE (Polyethylene Terephthalate)**, when you buy it comes in the form of soda, liquor and juice bottles, peanut butter jars, and some jars for oils. When recycled this plastic may take the form of fabrics and carpet fibers in new products.
- **HDPE (High Density Polyethylene)**, when you buy it comes in the form of containers used for milk, juice, detergent, bleach and motor oil. When recycled this plastic is used for (among other products) lumber

substitutes, trash and compost containers.

But recycling your bottles is just one (albeit important) part of the equation. Buying products *made* from recycled plastic completes the cycle.

Here are items you already buy that could have recycled plastic content:

- patio furniture
- car accessories
- carpets
- clothing hangers
- door mats
- garden hoses
- plastic trash bags
- T-shirts
- ink jet and toner cartridges

New recovery ideas are evolving all the time. A recent patent was awarded to a company in Tokyo for a weather resistant synthetic wood material made in part from recovered plastic. Another company in Canton, Ohio, has a patent for a method of making concrete blocks using scrap plastic materials.

When you shop check labels for the percentage of recycled materials used in the product. The higher the percentage in the product you purchase the more you are contributing to the cycle of sustainability.

Did you know?

Each of us generates on average 4.4 pounds of waste per day per person, with 40% of our municipal garbage made up of kitchen and garden waste. But recycling and composting recovered 24% of municipal solid waste as far back as 1994. That's around 49 million tons, and it's even more today thanks to greater ecological awareness.

Recycling all of your home's waste newsprint, cardboard, glass, and metal can reduce carbon dioxide emissions by 850 pounds a year, and on a smaller scale, recycling just one aluminum can saves enough energy to run a television set for three hours.

A single tree can filter up to 60 pounds of pollutants from the air each year. Yet every Sunday the United States wastes nearly 90% of recyclable newspapers, which wastes about 500,000 trees.

Also, every year Americans throw out 24 million tons of grass clippings, leaves, and other yard waste.

Those environmentally conscientious citizens who join tree planting movements or create compost piles help to balance their local ecosystem. Many seemingly small measures can add up to big results.

These fascinating facts were compiled from information provided by the USEPA and uses nationwide figures.