

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and water bottles sold in the U.S. Although both Coke and Pepsi met their recycled content goals in 2005, Coke has withdrawn its commitment.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

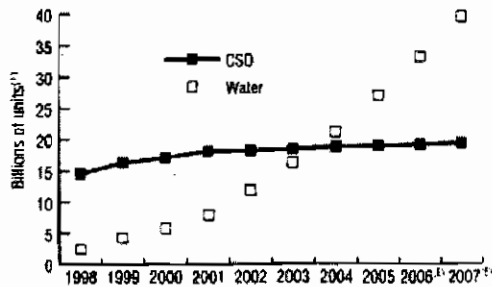
Water, the oldest liquid on earth, is the biggest selling, fastest growing new-age drink on the market. Packaged almost exclusively in plastic bottles made of polyethylene terephthalate (PET), the ubiquitous water bottle has experienced unprecedented growth during the past decade. Package sizes range 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

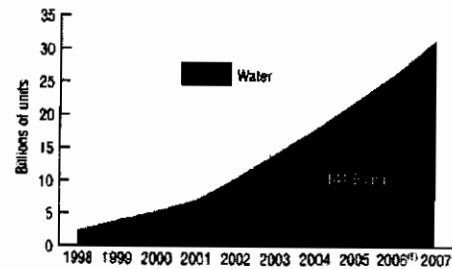
Most Americans pay a monthly water bill for municipal tap water, at an average cost of \$2 per 1,000 gallons (a fraction of a cent per gallon), according to the American Water Works Association (Denver). Filtering tap water by

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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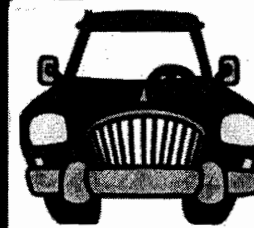
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PHOENIX QUARTERLY

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:

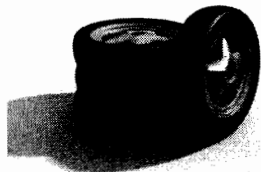
<http://www.durangogov.org/resident/services/recycling.htm> for other recycling opportunities.

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.



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

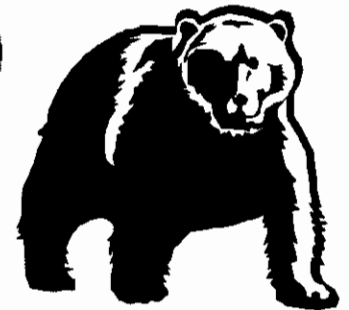
Be Bear Smart

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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