STAFF REPORT

SAUSALITO CITY COUNCIL

AGENDA TITLE: Phase out of City Acquisition of Bottled Water

RECOMMENDED MOTION: Adopt a Resolution of the City Council of the City of Sausalito Authorizing the Phase out of Bottled Water Purchases by the City

DISCUSSION

On June 23, 2008 the United Stated Conference of Mayors adopted a resolution encouraging mayors to phase out spending on bottled water and to promote the importance of municipal water. San Francisco Mayor, Gavin Newsom, author of the resolution, stated that "Cities are sending the wrong message about the quality of public water when we spend taxpayer dollars on water in disposable containers from a private corporation. Our public water systems are among the best in the world and demand significant and ongoing investment."

Local jurisdictions that have taken action to phase out the acquisition of bottled water include San Francisco and Mill Valley. A copy of the Mill Valley "CITY MANAGER DIRECTIVE - Permanent Phase-Out of Bottled Water Purchases by City of Mill Valley Government" along with the related press release and educational flyer are attached hereto as Attachment No. 1. A copy of San Francisco Mayor Gavin Newsom's press release is attached hereto as Attachment No. 2.

According to the Container Recycling Institute:

- "Americans buy an estimated 34.6 billion single-serving (1 liter or less) plastic water bottles each year. Almost eight out of ten end up in a landfill or incinerator. Hundreds of millions end up as litter on roads and beaches or in streams and other waterways. Taxpayers pay hundreds millions of dollars each year in disposal and litter cleanup."

- "Sales of bottled water in the U.S. are going up, up and up. In the three years between 2002 and 2005, sales doubled from 15 billion units sold, to 29.8 billion. This is almost seven times the 3.8 billion units sold in 1997.... What does this all mean? More PET bottles produced, more wasted, and a smaller percentage recycled."

(Source: www.container-recyling.org)

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Additional information on this topic from the CRI is set forth in the report attached hereto as Attachment No. 3.

The proposed resolution (Attachment No. 4) follows the model established by Mill Valley and phases out the use of bottled water by the City as follows:

- Beginning January 1, 2010, no City department or agency will purchase single serving bottled water using city funds; and

- By July 1, 2010, all City departments and agencies occupying either city or rental properties will have installed filters or bottle-less water dispensers that utilize MMWD supplied water.

The prohibition on the acquisition of bottled water would not apply to:

- Employees utilizing non-city funds to acquire bottled water and bringing it into the workplace;
- City sponsored special events; provided, however, that where feasible alternatives to the use of bottled water will be explored in connection with such events and where bottled water is used, efforts will be made to obtain bottled water from companies utilizing recycled products;
- Fire Department field operations;
- Emergency situations; or
- Where existing contracts require the use of bottled water – this would only apply until the expiration of such contracts.

The Legislative Committee (Mayor Leone and Vice Mayor Weiner) have reviewed this matter and recommend Council approval.

FISCAL IMPACT

Currently unknown but it is anticipated that this action will result in the City saving money or that it would be cost neutral.

STAFF RECOMMENDATIONS

Adopt a Resolution of the City Council of the City of Sausalito Authorizing the Phase out of Bottled Water Purchases by the City

ATTACHMENTS

1. City of Mill Valley City Manager Directive; Press Release and Educational Flyer
2. City of San Francisco Press Release

3. CRI Report – "Water, Water Everywhere – The growth of non-carbonated beverages in the United States."
4. A Resolution of the City Council of the City of Sausalito Authorizing the Phase out of Bottled Water Purchases by the City

PREPARED BY:

Mary Anne Wagner, City Attorney

SUBMITTED BY:

Adam W. Politzer, City Manager

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Attachment No. 1

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MILL VALLEY

CITY MANAGER DIRECTIVE

Permanent Phase-Out of Bottled Water Purchases by City of Mill Valley Government

Introduction

Mill Valley is proud of its role as a leader in environmental protection. Our environmental values are reflected by the numerous environmental initiatives we have launched over the past several years and by the recent hire of a part-time Sustainability Director to advance sustainability related policies and programs for the City. An overriding goal of these initiatives is to substantially reduce the ecological footprint of our residents and City government.

Toward that end, I am directing all City departments to immediately begin phasing out the purchase and use of bottled water for most City uses. Although their purchase may be necessary for some circumstances, including emergency related situations, for general office work, Mill Valley employees should be encouraged and eventually required to use their own re-usable bottles or containers. Departments that currently use bottled water dispensers and wish to retain this service will need to switch to bottle-less water dispensers.

Background

Over the past decade, Bay Area residents -- like citizens across the U.S. -- have responded to marketing campaigns to purchase bottled water, and record numbers of plastic water bottles have been purchased at the expense of the environment. The global consumption of bottled water was 41 billion gallons in 2004, up 57% from the previous five years. This consumption increase occurred despite the fact that bottled water costs 240 to 10,000 times more than tap water. Bottled water marketing campaigns have inaccurately suggested that bottled water is safer than the more stringently regulated tap water delivered by the Marin Municipal Water District (MMWD).

Data suggest that the environmental impact of the bottled water industry is profound. According to the Container Recycling Institute, the manufacture and transport of the plastic water bottles that U.S. consumers purchase annually requires more than 47 million gallons of oil, resulting in one billion pounds of climate changing carbon dioxide released into the biosphere. In addition, more than one billion plastic water bottles are landfilled in California each year, leaking toxic additives such as phthalates into the surrounding groundwater. Water diverted from local aquifers for the bottled water industry has been documented as harmful to surrounding ecosystems. All of this waste and pollution is generated by a product that is often inferior in quality to that of the pristine water delivered my MMWD.

As the City advances our Local Climate Protection Plan to combat global warming, it is essential that we initiate policies that limit contributors to climate change. There are alternatives. For example, the Mill Valley library has already invested in an under-sink filter at a lower cost, including installation and on-going costs, than they were spending annually on bottled water. Bottle-less dispensers that are supplied by MMWD are easily available and economically competitive.

Directive

By virtue of the power and authority vested in me by Section 2.04.020 of the Mill Valley Municipal Code to provide administration and oversight of all departments and governmental units in the City of Mill Valley, I hereby issue this Directive, to become effective immediately:

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- Beginning June 16, 2008, there will be a prohibition from any City department or agency purchasing single serving bottled water using city funds, unless an employee contract specifies usage. This prohibition will apply to City contractors and City funded and/or sponsored events.

- By August 1, 2008, all City departments and agencies occupying either city or rental properties will have installed filters or bottle-less water dispensers that utilize MMWD supplied water. Waivers will only be granted for legitimate engineering, health, fiscal, or emergency concerns.

Small numbers of individual bottles may be kept on hand for legitimate back up or emergency situations.

Preliminary research indicates these changes will result in monetary savings for Mill Valley. Bottle-less dispensers that use MMWD water cost under $30/month. The Finance Department estimates that the City will save approximately $5,000 per year by switching to bottle-less dispensers.

For More Information
For questions concerning this Directive and its implementation, including various options and cost information on bottle-less dispensers that use MMWD water, please contact Carol Misseldine, Sustainability Director, City of Mill Valley, 415/388-5273, cmisseldine@cityofmillvalley.org.

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For Immediate Release **June 3, 2008**

Contacts:
Anne Montgomery, City Manager, 388-4033
Carol Misseldine Sustainability Coordinator, 388-5273

MILL VALLEY BANS USE OF CITY FUNDS FOR BOTTLED WATER

Environmental impacts of plastic, high costs cited

Mill Valley City Manager Anne Montgomery announced today that she is issuing a directive, effective June 16th, 2008, to require that all City departments begin to immediately phase out the purchase and use of bottled water for all City uses except legitimate emergency purposed. The ban includes single serve plastic water bottles as well as dispensers, which must be changed to bottle-less dispensers that are connected to Marin Municipal Water District (MMWD) water.

"The manufacture and transport of plastic water bottles purchased in the U.S. requires more than 47 million gallons of oil, resulting in one billion pounds of climate changing carbon dioxide released into the biosphere," Montgomery noted.

Other environmental impacts from bottled water noted in the directive include leaking of toxic materials from the 1 billion bottles that are land-filled each year, and impacts on marine life from plastics that end up in the ocean.

"All of this waste and pollution is generated by a product that is often inferior in quality to that of the pristine water delivered by MMWD," Montgomery said. Bottled water is regulated by the Food and Drug Administration, which often has less stringent standards than the Environmental Protection Agency, which monitors municipal water supplies.

The Mill Valley library has already invested in an under-sink filter at a lower cost than they were spending annually on bottled water. Preliminary research conducted by Mill Valley's Finance Department and Carol Misseldine, Mill Valley's sustainability

coordinator, indicates this directive will save the City of Mill Valley approximately $5,000 per year.

"Plastic never biodegrades and is building up to a frightening degree in our oceans," said Misseldine. "It's good to know that we will be saving money by doing the right thing."

The directive prohibits any City department or agency from using City funds to purchase single serving bottled water after June 16, 2008 unless an employee contract specifies usage. This prohibition will also apply to City contractors and City funded and/or sponsored events. By August 1, 2008, all City departments and agencies must install filters or bottle-less water dispensers that utilize MMWD supplied water. Waivers will only be granted for legitimate engineering, health, fiscal, or emergency concerns.

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Mill Valley Prohibits the Use of City Funds for Bottled Water.

5 Facts About Bottled Water

1. **It's expensive.** Up to 10,000 times more expensive than tap water!

2. **It's often lower quality** than tap water. Bottled water is regulated much less strictly than tap water, resulting in numerous recalls due to the presence of carcinogens, arsenic, bacteria and even parasites.

3. **It's oil-intensive.** 47 million gallons of oil are used to manufacture and transport plastic water bottles each year in the U.S., which creates one billion pounds of climate-changing carbon dioxide emissions.

4. **It causes environmental problems.** Plastic water bottles will never biodegrade. Instead, they just break into small plastic particles that can kill marine and other wildlife when they mistake those particles for food.

5. **It causes health problems.** Plastic water bottles in our landfills leak toxic chemicals like phthalates and Bisphenol-A (BPA) into our groundwater. Tests indicate that the contamination of our bodies by BPA can increase cancers and reproductive abnormalities

Alternatives to Bottled Water

Drink tap water! Tap water is often higher quality than bottled water and it's much cheaper. The Marin Municipal Water District (MMWD) provides some of the highest quality water available in the U.S. And for those who are interested in even greater protection, under-sink or counter top water filters are the best and healthiest solution.

Bring your own bottle! Do your part to reduce plastic pollution by bringing your own reusable water bottle with you everywhere you go. Numerous brands of re-usable water bottles are available in local stores and on-line.

Make your events plastic-free! To reduce your event costs and help the environment at the same time, forget the bottled water. Just make sure water pitchers are on hand for your next event, and fill them with ice and high quality tap water. In promotional materials for your event, remind attendees to bring their own water bottles, and have durable glasses on hand for those who forget.

To find out more about the health and environmental impacts of bottled water, go to:

http://www.allaboutwater.org/environment.html

http://tinyurl.com/4awh54

For more information about Mill Valley's sustainability initiatives, contact Carol Misseldine, Sustainability Director, *cmisseldine@cityofmillvalley.org*. LoE 9

Attachment No. 2

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Mayors Vote to End Taxpayer Spending on Bottled Water

06/23/08 - The U.S. Conference of Mayors passed a resolution today encouraging mayors to phase out city spending on bottled water and to promote the importance of municipal water. The resolution, authored by San Francisco Mayor Gavin Newsom and sponsored by mayors from 17 major cities, aims to redirect taxpayer dollars to other essential city services.

"Cities are sending the wrong message about the quality of public water when we spend taxpayer dollars on water in disposable containers from a private corporation," said San Francisco Mayor Gavin Newsom. "Our public water systems are among the best in the world and demand significant and ongoing investment."

The vote comes on the heels of actions by more than 60 mayors nationwide, such as cancelling bottled water contracts, to address the budgetary, environmental and social impact of such purchases (visit ThinkOutsideTheBottle.org for a map of city actions and facts on bottled water impacts). The cities of San Jose, Miami and Orlando announced bottled water phase-outs in the days leading up to the vote.

Over the past year, the U.S. Conference of Mayors explored the economic and environmental impact of bottled water. Research conducted by Conference staff has found that bottled water is being sold for as much as 4000 times the cost of tap water delivery even though up to 40 percent of bottled water comes from the same source. Cities are also spending more than $70 million a year to dispose of plastic water bottles. San Francisco and other large cities were also spending more than $500,000 a year on annual contracts.

"It's just plain common sense for cities to stop padding the bottled water industry's bottom line at taxpayer expense," said Gigi Kellett, national director of the Think Outside the Bottle campaign. "This resolution will send the strong message that opting for tap over bottled water is what's best for our environment, our pocketbooks and our long-term, equitable access to our most essential resource."

Cities are currently in need of an additional $22 billion or more each year to maintain and expand public water systems. The resolution is seen as a means of rebuilding the public support needed to make this investment, in the face of an annual $150 million-plus bottled water advertising blitz that has eroded the public's confidence in tap water. Today one in five people believe the only place to get water is from a bottle. And although the bottled water industry hired a team of lobbyists to defeat the resolution, the measure has received broad support from prominent restaurants and a range of businesses and public interest organizations nationwide as part of the national Think Outside the Bottle campaign.

The resolution encourages cities to phase out government use of bottled water, where feasible (with exceptions, such as in the case of emergencies and when safe, clean municipal water is unavailable), and to promote the importance of municipal water. The U.S. Conference of Mayors represents more than 1100 mayors nationwide.

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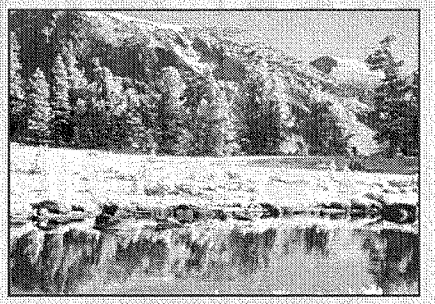
bottled water facts

October 2007

Permanent Phase-Out of Bottled Water Purchases:
Facts for City and County of San Francisco Employees

For more than a decade, bottled water companies have spent millions to peddle the myth that bottled water is safer, cleaner, better-tasting and even more glamorous than tap water. The result is record spending on bottled water by consumers and local governments at the expense of the environment.



Snow melts into the Tuolumne river to fill Hetch Hetchy Reservoir with pristine water.

But San Francisco's tap water – pristine snowmelt from the Sierra Nevada mountains and the Hetch Hetchy Reservoir – is already some of the purest, safest and best tasting water in the world. San Francisco is also proud of its historic role as a leader in environmental protection, and it is critical that we continue to initiate new policies that further protect our natural resources and combat global climate change.

In June 2007, San Francisco Mayor Gavin Newsom issued an Executive Directive prohibiting any City department or agency from purchasing bottled water using City funds.

What does this mean for City employees?

City departments are no longer permitted to purchase single-serving bottles of water, unless an employee contract specifies usage.

By December 1, 2007, all City departments and agencies occupying either City or rental properties will remove City-funded bottled water dispensers and where possible install bottle-less water dispensers that utilize Hetch Hetchy tap water. Contact your appointed department representative for more information on determining bottle-less water dispenser locations in your department.

All City employees are responsible for meeting the mandates of the Executive Directive. Bottled water may not be purchased for business meetings and events coordinated using City department funds. Please contact your supervisor to make special arrangements to serve water to members of the public or event participants.

Pitchers are a good alternative for business meetings and public events.

San Francisco tap water is a safe, healthy choice.

The San Francisco Public Utilities Commission's (SFPUC) regional water system collects granite-filtered spring snowmelt from the Sierra Nevada at the Hetch Hetchy Reservoir for delivery to San Francisco and Bay Area taps.

Water collected at the Hetch Hetchy Reservoir exceeds all federal and state criteria for water quality and San Francisco's tap water is tested nearly 90,000 times a year throughout the system to ensure its safety every day.

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What's the environmental impact of bottled water? Think before you drink.

The environmental impact of bottled water is profound.

- It takes an estimated 1.5 million barrels of oil to make the plastic water bottles Americans use each year.[1]
- Americans throw away 38 million recyclable plastic water bottles into landfills each year, taking more than 1,000 years to biodegrade and leaching toxics into ground water. [2]
- Water coolers and individual water bottles are extremely heavy to transport. Distribution of bottled water by boat, truck and train involves burning massive quantities of fossil fuels.
- Bottled water is often from a municipal source. Water diverted from local aquifers for the bottled water industry can strain surrounding ecosystems.

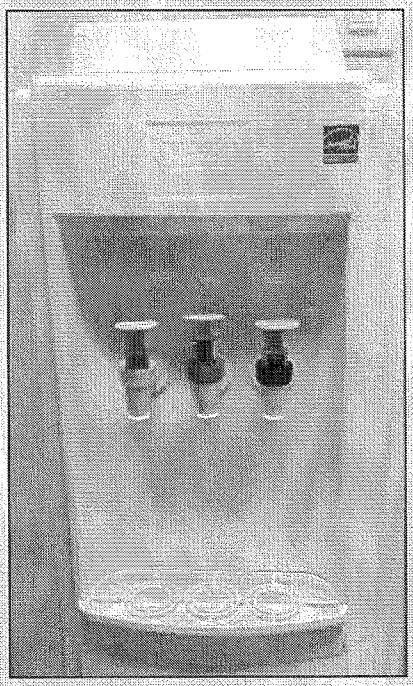
All of this waste and pollution is generated by a product that by objective standards is often inferior to the quality of San Francisco's pristine tap water.

Thank You

Thank you for your efforts to protect our natural resources and make San Francisco a healthier place to call home.

For more information on San Francisco's water quality and for a copy of Mayor Newsom's Executive Directive, please visit *www.sfwater.org* or *www.sfenvironment.org*

1 *"Bottled Water: Pouring Resources Down the Drain" Earth Policy Institute, February 2, 2006. June 28, 2007.*
2 *"Message in a Bottle" Fast Company Magazine, July 2007.*



Many City departments will replace bottled water dispensers with bottle-less dispensers that deliver Hetch Hetchy tap water.

SFPUC WATER WASTEWATER POWER

CITY AND COUNTY OF SAN FRANCISCO

SF Environment

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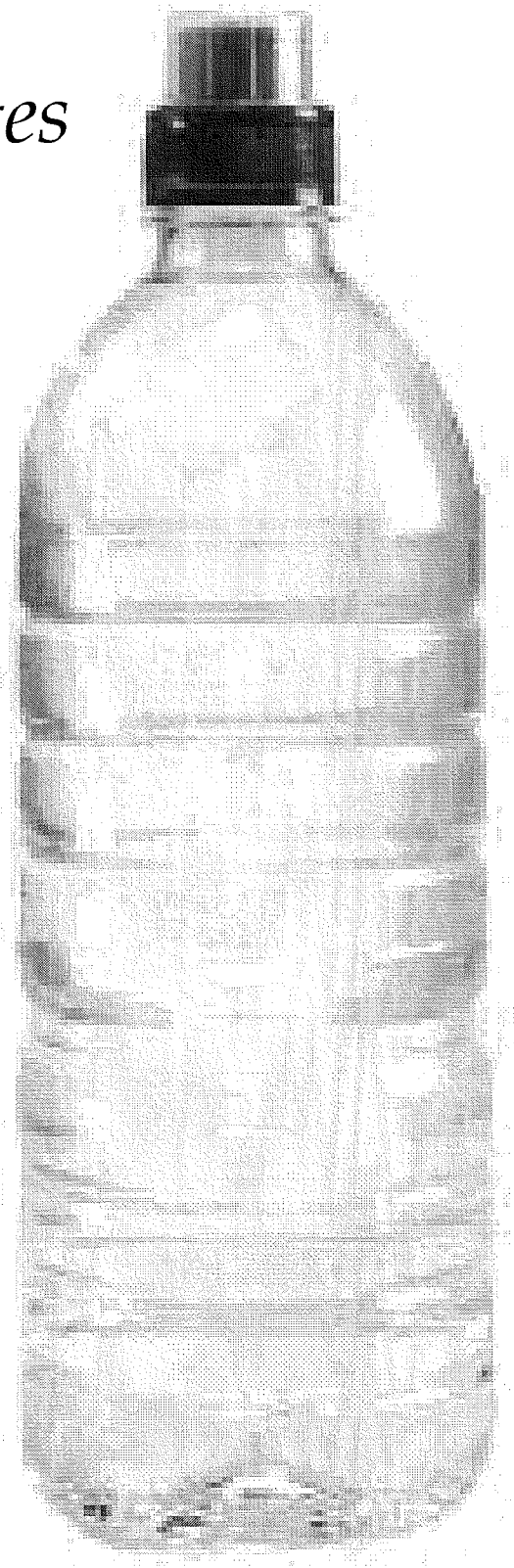
Water, Water Everywhere:

The growth of non-carbonated beverages in the United States



by Jennifer Gitlitz and Pat Franklin

February 2007

Container Recycling Institute

www.container-recycling.org

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Water, Water Everywhere:
The growth of non-carbonated beverages in the U.S.

Beverage spending on the rise: American consumers spent more than $270 billion for the 36 billion gallons of fountain and packaged beverages they consumed in 2005.[1] That's about what American families spent on gasoline that year[2], and 29% more than the $210 billion spent on 34 billion gallons in 2002.[3] During that 3-year period, the price for a gallon of beverage grew from $6.18 to $7.53: a 21% increase—almost three times faster than rise of the Consumer Price Index. Clearly, consumer demand for beverages has not yet been sated, and has not been dampened by rising prices.

Table 1. Packaged and fountain beverage sales, 2002 and 2005*

	2002	2005	Increase #	Increase %
Gallons sold (million)	34,019	35,969	1,950	6%
Dollars spent (million)	$210,078	$270,731	$60,653	29%
Cost per gallon	**$6.18**	**$7.53**	**$1.35**	**22%**

*Source: Beverage World, May 2006

Increasing gallon & unit sales: In terms of packaged beverages alone, consumption *volume* dropped from 103 gallons per capita in 2002 to 100 gallons in 2005, while the number of *units* the average person purchased annually rose from 672 to 724: or one extra bottle or can each week for every man, woman, and child in the nation.

Table 2. Packaged beverage consumption, 2002 and 2005*

	Year 2002	Year 2005	Increase #	Increase %
US population (million):	289	296	8	3%
Total units sold (billion):	194	215	21	11%
Units sold per capita:	**672**	**724**	**52**	**8%**

* Source: Beverage Marketing Corporation 2006, and U.S. Census Bureau.

Because the population of the U.S. is growing, total consumption has also increased, even though per capita gallonage for packaged beverages dipped slightly. Total packaged beverages sales increased by 6.3%: from 30 million packaged gallons in 2002 to 31.8 million in 2005.

The number of glass, aluminum and plastic beverages containers sold increased twice as fast. Americans purchased 215 billion beverage cans and bottles in 2005: 21 billion more than in 2002.[4]

Fizzling out: The increase in total beverage consumption is not being borne evenly among carbonated (fizzy) and non-carbonated (flat) drinks. Bottles and cans for these non-fizzy drinks comprised 19 billion units—or 90%--of the 21-billion unit increase, with sales growing from 44 billion units in 2002 to 63 billion units in 2005.

> *"Sales of flavored, non-carbonated drinks are likely to surpass soda sales by 2010."*

At the same time, fizzy drinks lost popularity. Carbonated soft drink (CSD) consumption remained flat at 88.6 billion units per year, while packaged beer sales increased by only 4% in 3 years—about the same rate as population growth.[5] The number of beer cans and bottles sold in 2005 was 62 billion, up only slightly from the 59.7 billion units sold in 2002. Soda and beer each lost market share, however, losing 5 and 2 percentage points respectively.

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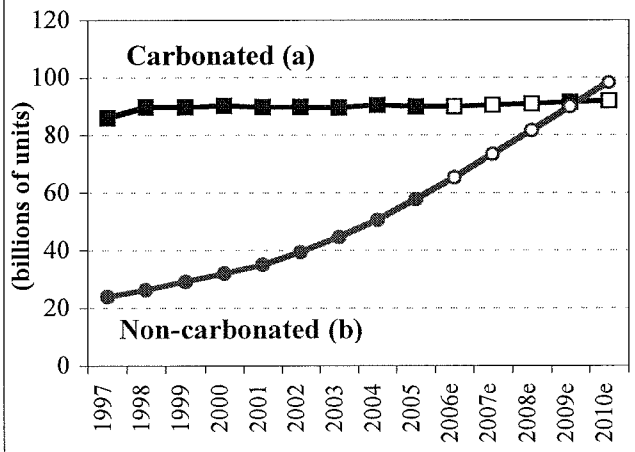
Figure 1. Non-alcoholic beverage sales, 1997-2005, with projections to 2010



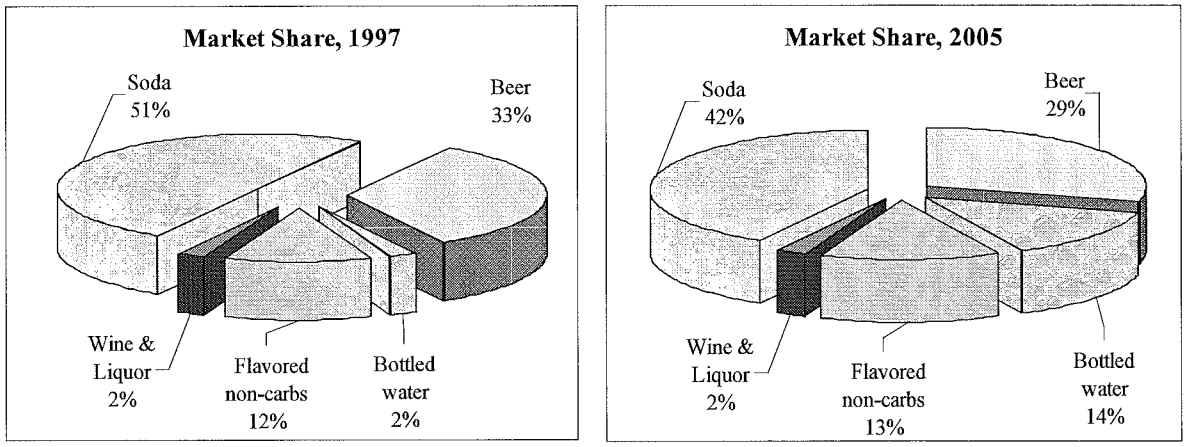
(a) Carbonated soft drinks and domestic sparkling water. (b) Sports drinks, fruit beverages, ready-to-drink tea, energy drinks, and bottled water. Projections are conservative, based on declining (rather than increasing) growth rates for flavored non-carbs, and on slowly increasing (rather than flat) soda sales.

In terms of combined market share, the 7 percentage points lost by soda and beer were picked up by non-carbonated, non-alcoholic beverages. Sales of sports drinks, fruit juices and drinks, and ready-to-drink teas each increased by one billion units per year, while energy drinks—barely a blip on the radar in 2002—reached two billion units in 2005. Combined, these flavored, non-alcoholic drinks grew from 23.5 to 28.3 billion units: an increase of just under 5 billion units.

During the same period, sales of wine and liquor grew from 3.9 to 4.7 billion units: sales of table wine and spirits grew by 32% and 10% respectively, but this category remained at only 2% of the overall market.

As Figure 1 shows, sales of non-alcoholic non-carbonated drinks (including bottled water) are likely to surpass soda sales by 2010. This assumption is based on conservative estimates: that growth rates for water, energy, and sports drinks will slow compared to the last five years, and that carbonated soft drinks will gain about half a billion in total annual unit sales, rather than stay at a plateau as they have been for the past few years.

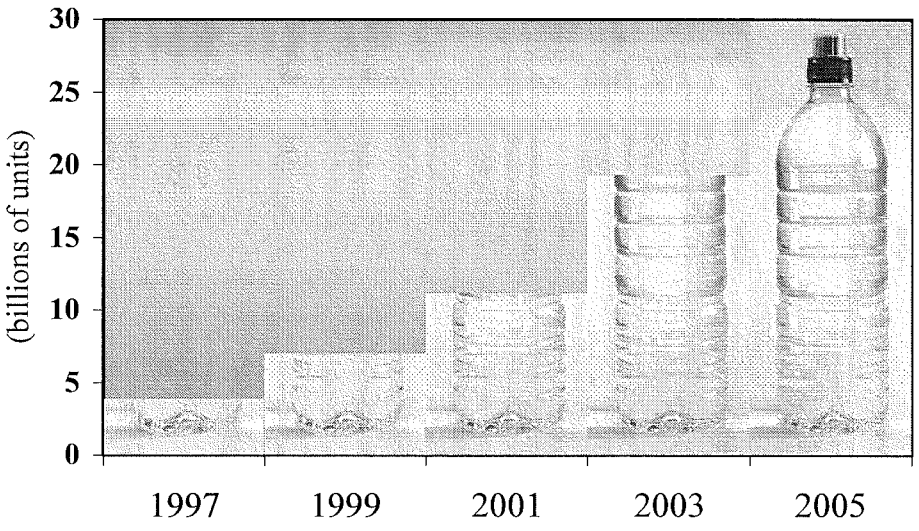
Figure 2. Market Share for Major Beverage Categories, 1997



Notes: Soda includes domestic sparkling water. Flavored non-carbs include sports, energy, and fruit drinks; and iced tea. Dairy excluded. Bottled water includes sizes less than or equal to 1 gallon. Total units sold were 171 billion in 1997, and 215 billion in 2005. Derived by the Container Recycling Institute using data from the Beverage Marketing Corporation.

Water, water everywhere: Growth in the non-carbonated categories was eclipsed by growth in bottled water sales. Non-sparkling bottled water sales doubled in three years: going from 15 billion units sold in 2002 to 29.8 billion sold in 2005. This is almost seven times the 3.8 billion units sold in 1997. Sales of plastic water bottles 1 liter or less increased more than 115%, from 13 billion in 2002 to 27.9 billion in 2005.

Figure 3. U.S. Bottled Water* Sales, 1997-2005



* Defined as domestic, non-sparkling water packaged in plastic and glass, in sizes up to and including 1 gallon. Source: Beverage Marketing Corporation, 2006.

In total, non-carbonated, non-alcoholic beverages grew from 21% to 27% of total beverage market share from 2002 to 2005, while carbonated soft drinks, sparkling water, and beer dropped from a combined 77% to 71%. In 1997, beer and soda made up 84% of the beverage market and non-carbonated beverages held a mere 14%, as Figure 2 shows.

Mounting litter and waste: CRI estimates that in 2005, an estimated 144 billion containers were wasted in the United States. Wasted means not recycled: sent to landfills or incinerators, or littered along our country's roads and parks, fields and streams, and rivers and beaches. This includes approximately 54 billion aluminum cans, 52 billion plastic bottles and jugs, 30 billion glass bottles, and about 10 billion pouches, cartons, and drink boxes.

"Approximately 18 million barrels of crude oil equivalent were consumed in 2005 to replace the 2 million tons of PET bottles that were wasted instead of recycled."

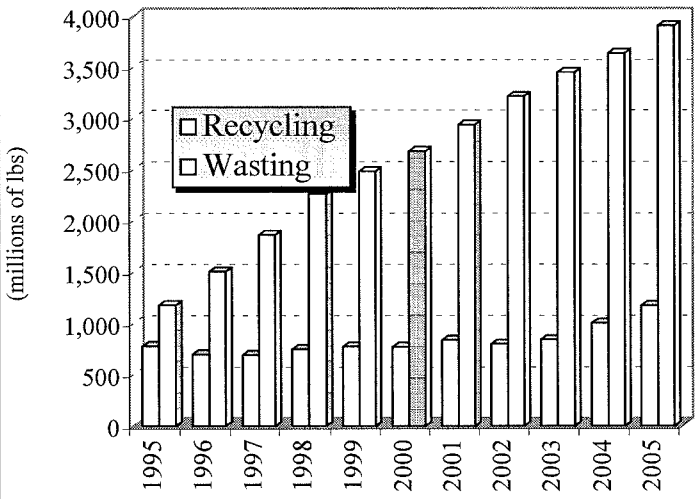
Environmental and economic implications: Almost two thirds, or 37 billion, of the 58 billion non-carbonated, non-alcoholic beverages purchased in 2005 were packaged in polyethylene terephthalate (PET) plastic bottles.[6] A full 96% of the bottled water was sold in PET bottles, the vast majority being "single serve" sizes, including the 10-12 oz., 16 oz, 20-24 oz, and 1 liter sizes. These bottles are prone to being littered, and have a lower recycling rate than any of the most common packaging materials. In 2005, 23.1% of the 5 billion lbs of PET sold in the U.S. were recycled, or 1,170 million lbs--up from 775 million lbs recycled in 1995. But the amount recycled only tells part of the story. In 1995, the nationwide recycling rate for PET was almost 40%, and the amount of PET wasted (sent to landfills) was 1,175 million lbs. By 2005, wasting had nearly tripled—to 3,900 million lbs (or almost 2 million tons), as Figure 4 shows.[7]

It is also important to note that the 23.1% PET recycling rate in 2005 includes plastic carbonated soft drinks (CSD) bottles which are recycled at a higher rate than water and other non-carbonated beverages, due to the high recovery rates in eleven states where they have a 5- or 10-cent refund value. In 2005, the American Chemistry Council did not break out CSD as they have done for the past 16 years, but in 2004 the CSD recycling rate was 33.7% and the recycling rate for all other PET bottles was 14.5%. It is reasonable to assume that the rate for non-carbonated beverages was below 20% in 2005.

PET plastic is a petroleum product. Because it is presently recycled at such low rates, tens of billions of new plastic bottles must be manufactured each year from virgin materials—fossil fuels—to replace those bottles that were not recycled. The Container Recycling Institute estimates that approximately 18 million barrels of crude oil equivalent were consumed in 2005 to replace the 2 million tons of PET bottles that were wasted instead of recycled.

When PET plastic bottles are made from virgin materials rather than used bottle resin, more greenhouse gases are produced as well. An estimated 800 thousand metric tons of carbon equivalent (MTCE) were released in the process of making approximately 50 billion new PET bottles from virgin rather than recycled materials.

Figure 4. PET Plastic Bottle Recycling and Wasting, 1995-2005



Derived from "2005 Report on Post Consumer PET Container Recycling Activity." National Association for PET Container Resources, 2006.

When the 54 billion wasted aluminum cans, 7 billion wasted HDPE bottles and jugs, and 29 billion glass bottles are considered, the total emissions of greenhouse gasses from new ["replacement"] container manufacturing comes to about 4.8 million tons, and the unnecessary expenditure of energy comes to 53.5 million barrels of crude oil equivalent.[8]

There are a host of other environmental impacts too numerous to catalog in this brief paper, but they include damage to wildlife and marine life, and air and water pollution associated with raw materials extraction, processing, and industrial container production; as well as landfilling and incineration.

Table 3. Energy Impacts of Replacing Beverage Containers Wasted in 2005 (a)

	Potential Energy Savings (a)	**Containers Wasted, 2005** (b)		**Energy Wasted Through "Replacement Production" in 2005** (c)	
Container Type	(MBtu/ton recycled)	Units (billion)	Tons (million)	Barrels of Crude Oil Equivalent (million)	Households' Total Annual Energy Needs Met (million)
Aluminum cans	207	54	0.8	28.6	1.7
PET plastic bottles	53	49	2.0	18.0	1.1
HDPE plastic bottles	51	7	0.4	3.7	0.2
Glass bottles	3	29	6.9	3.2	0.2
Total		**139**	**10.0**	**53.5**	**3.3**

(a) Source for per ton energy savings: "Waste Management and Energy Savings: Benefits by the Numbers." Choate, Ferland et. al., US Environmental Protection Agency, Washington DC, Oct. 2005.

(b) Sales, recycling, and wasting figures derived from the Aluminum Association, the U.S. Department of Commerce, the U.S. EPA Office of Solid Waste, the American Plastics Council, the National Association of PET Container Resources, and the Beverage Marketing Corporation. CRI has made some estimates for glass and HDPE recycling using historical data.

(c) Factors used: 5.78 MBtu/barrel crude oil. Source for average annual residential energy consumption (94.6 MBtu per household): U.S. Department of Energy, Energy Information Administration, ŅA Look at Residential Energy Consumption in 2001.Ó

While the environmental benefits of recycling beverage containers are well known, the economic benefits are less so. Few policymakers are aware of the fact that many businesses benefit from using post-consumer glass bottles, plastic bottles and aluminum cans. Both processors and end-users of these scrap containers would benefit from having a steady supply of high-quality post-consumer beverage containers to use as feedstocks to make new containers and other products. Recovering more beverage containers from the waste stream makes environmental sense, and it makes economic sense.

Reversing the tide of trash: CRI estimates that the national beverage container recycling rate was 33% in 2005, down twenty percentage points from the high of 53% in 1992. But in the eleven states[9] that have container deposit systems or "bottle bills" in place, where a small refundable deposit is placed on one-way (non-refillable) beverage containers, recycling rates range from 65-95%: 2-3 times higher than in the states without deposit laws. Of the eleven deposit states, only three—Maine, Hawaii, and California—include non-carbonated containers. Because the market share of "non-carbs" has increased from nearly zero twenty years ago to 27% of the beverage market today—and because this trend shows no signs of slowing—we are

likely to see continued efforts to update existing deposit laws to include these popular drinks that would have been included in the laws if they had been on the market at the time the laws were enacted.

Consumers are spending more on packaged beverages, and getting less for their money, so it would seem that adding a small—fully refundable—deposit of a nickel or a dime to bottled water, sports, fruit, and energy drinks would not pose a hardship for any segment of the population. Attempts should also be made to improve the efficiency and effectiveness of curbside recycling programs nationwide, and to increase recycling options in public spaces. Society stands to gain significant environmental benefits from keeping 144 billion beverage containers out of our nation's landfills, roads, streams, and parks each year.

NOTES:

This report was written by Jenny Gitlitz and Pat Franklin, February 2007.

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[1] Excluding milk, coffee, instant mixes, and frozen concentrates.

[2] U.S. Bureau of Labor Statistics.

[3] Includes fountain and packaged beverages. Source: *Beverage World*, June 2003 and May 2006.

[4] Dairy beverages, wine coolers, packaged coffee, and frozen concentrates are excluded from this analysis. Sales data were derived by the Container Recycling Institute as part of its "Beverage Market Data Analyses," conducted in 1999, 2003, and 2007, using data from "Beverage Packaging in the U.S." (2000, 2003 and 2006 editions), Beverage Marketing Corporation; *Beverage World* magazine (June 2003 and May 2006); the Beer Institute; and other industry sources.

[5] The U.S. population grew from 289 million in 2002 to 296 million in 2005.

[6] The remaining third were divided (5-7% each) among aluminum cans, HDPE plastic bottles, glass bottles, aseptic boxes, paper cartons, and foil pouches.

[7] National Association of Plastic Container Resources (NAPCOR), December 2006.

[8] Derived by the Container Recycling institute using emissions factors in "Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks." 2nd Edition. U.S. Environmental Protection Agency (EPA530-R-02-006) May 2002.

[9] The states are Oregon, Vermont, Maine, Massachusetts, Connecticut, New York, Delaware, Michigan, Iowa, California, and Hawaii.

Attachment No. 4

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RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAUSALITO, CALIFORNIA AUTHORIZING THE PHASE OUT OF BOTTLED WATER PURCHASES BY THE CITY

WHEREAS, the United Stated Conference of Mayors adopted a resolution encouraging cities to phase out the expenditure of public funds on the acquisition of bottled water; and

WHEREAS, Americans acquire billions of single serving plastic water bottles annually the majority of which are not recycled; and

WHEREAS, energy utilized to produce and transport bottled water has a negative impact on the environment; and

WHEREAS, this resolution expressly incorporates the supporting facts set forth in the staff report dated November 10, 2009.

Now, therefore, the City Council of the City of Sausalito does hereby resolve as follows:

1. Beginning January 1, 2010, no City department or agency will purchase single serving bottled water using city funds.

2. By July 1, 2010, all City departments and agencies occupying either city or rental properties will have installed filters or bottle-less water dispensers that utilize MMWD supplied water.

3. The prohibition on the acquisition of bottled water set forth in this resolution does not apply to:

    a. Employees utilizing non-city funds to acquire bottled water and bringing it into the workplace;
    b. City sponsored special events; provided, however, that where feasible alternatives to the use of bottled water will be explored in connection with such events and where bottled water is used, efforts will be made to obtain bottled water from companies utilizing recycled products;
    c. Fire Department field operations;
    d. Emergency situations; or
    e. Where existing contracts require the use of bottled water – this would only apply until the expiration of such contracts.

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PASSED AND ADOPTED at a regular meeting of the City Council of the City of Sausalito on the ____ day of _____, 2009, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
MAYOR OF THE CITY OF SAUSALITO

_____
CITY CLERK

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