The Story of Bottled Water

Dr. John T. O’Connor, PE
Tom O’Connor, PE
The modern history of bottled water has been dramatic for its creative marketing, rapid growth in sales worldwide, and now, seemingly, its incipient decline.
Drinking water has been stored in and, from earliest times, filtered through earthenware for over 7000 years.

One of the first bottled waters sold in the United States was the Reverend D. O. Griswold’s Saratoga Springs Spring Water.

Hawked under the name Doctor Clark, in 1820, it was advertised as a cure for stomach ailments.
The first drinking water to become widely available in the U.S. was Hiram Ricker’s spring water which was sold as a cure for kidney ailments.

Hiram’s water was bottled in Poland Spring, Maine as early as 1845.

Available locally in pottery jugs, three gallons sold for 15 cents.
5,000 B.C.E.

Earthenware for water sedimentation filtration storage

Middle East

1845 C.E.

Hiram Ricker’s springwater as cure for kidney ailments

Poland Spring, Maine
Mid-Twentieth Century - the Birth of an Industry

Water was generally bottled in glass which sometimes had a dark color to protect the contents against sunlight and limit the growth of algae.

Colored glass also tended to hide precipitates, such as calcium carbonate, which sometimes accumulated in the bottom of the bottles.
1960 - Colored Glass Bottles

- Dark colored glass to protect against sunlight, algae.
- CaCO₃ precipitates
Flavored Canadian Water
1968 - Bottled Water Goes Plastic

Water is heavy and expensive to transport, particularly when enclosed in thick glass. However, the development of clear polyethylene terephthalate (PET) by DuPont engineer, Nathaniel Wyeth, lightened the burden of shipping and stimulated the marketing of water with bright, attractive packaging of many sizes, colors, and complex shapes.
1968

Dupont polyethylene terephthalate

PET invented by Nathaniel Wyeth (brother of painter Andrew)

1 kg of PET requires about 2 kg of oil and produces 3 kg of CO₂

PET saves on shipping

Non-returnable containers
1977 Perrier introduces the fashion accessory for yuppies: its bowling-pin-shaped, green bottle.

Bottle Sizes (and water contents) begin to decrease.
Downsizing - with style

more container - less content
Perrier entered the U.S. market with a distinctive green, pin-shaped bottle. Promoted in an imaginative nationwide marketing program, its sales reached $20 million in its first year and tripled in the following year.

As a ‘fantasy gift’, Neiman-Marcus reportedly offered a swimming pool filled with Perrier.
1978 - The Bottle as Fashion Statement

Bottled in France since 1826 for its medicinal properties, Evian surfaced in 0.5 litre PVC bottles in 1969.

Thereafter, Evian launched a sculpted bottle for the Winter Olympic Games at Albertville.

In 1992, Evian premiered the launch of a PET bottle which was ‘completely collapsible’, presumably to save landfill space.

Evian Millennium limited edition bottle (1999) marked the millennium.

The Evian Nomade (2000); Evian Affinity (2001); Evian 1 litre compact bottle (2004); and Palace Bottle (2007) (which could be found solely in fine dining establishments) followed in rapid succession.
Marketing Poland Spring
Ride! Rock! Choose! Win! Movies! DVD!
-- and, oh yes! water!

Now brought to you by Nestlé, the Swiss Company that sells water throughout North America!

Enjoy your ride!
Despite advertising illusions,
most of the water sold in the U.S. is 
**groundwater**;

25% is derived from municipal water sources.
Produit du Canada

Cold water tastes good! It’s cold in Canada!
Canadian water tastes good!

The Canucks actually provided water quality data on their label
-- in two languages. Olé!

No lake here! The data indicate a moderately hard groundwater.
Arkansas  Missouri  Maine  Yugoslavia

U.S. States enter the market
St. Louis   Kansas City   Chicago   Okla. City

U.S. Cities enter the market
Chicago! ‘Great Lake’ or ‘Deep Artesian’!

Chicago offers a choice: Cubs or White Sox?
Gallon Jugs of Glacial, Artesian, Mountain, Lake, Spring, ...
8 ounces more than 1 gallon?

This gallon jug ruptured releasing all of Buffalo Don’s Crystal Pure Wisconsin Artesian Glacial Water onto my bookshelf.
Minnesota Distilled Water
-- with tasty salts added back in!

DRINKING WATER
Prepared by distillation
Selected minerals added for taste

INGREDIENTS: DISTILLED WATER, CALCIUM CHLORIDE,
POTASSIUM BICARBONATE, MAGNESIUM CHLORIDE.

ONE GALLON (3.79 L)

Kandiyohi Bottled Water Co.
Willmar, MN 56201
An IBWA Bottler Member
“Never Hit the Ground ...”

“...proud purveyor of fresh squeezed cloud juice.”

‘jes don’ get no bettern’ that!

“It’s Real Rain!”
Private Label Packaged Water
your organization's name and logo

34 cents per bottle when ordering pallet quantities!

By 2011, cost is ~$1 per bottle.
Most bottle labels tout purity, implying that there is nothing (e.g., 0% Fat) in the water - based on a 2,000 calorie diet.
Local Brands: for truckers and college women

Caution: This is not beer!

Won’t make you fat!
Targeting Water Drinkers

Kidz Water!
-- not just for yuppies and old fartz anymore!

It’s fluoridated!

many enthusiasts believe that bottled water contains no fluoride ...
For Sports Drinkers on the Run!

Glacier Brew
Springfield, MO City Utilities Tap Water
Culligan is Water?
Infilco Degremont
Discover Dothan, Alabama

A million years in the making!
Emergency Drinking Water Supply

Missouri:

West Plains
Flooding

Cabool
Terrorist Attacks

Gideon
Mushroom Clouds on Main Street

H2O'O'C Engineering
U.S. Packaged Water Consumption

≈ 10% Annual Growth

2006: 8.3 billion gallons
$11 billion revenues
26 gallons per person

Suppliers to Packagers
- Activated Carbon Products
- Bottle Closures
- Bottling Equipment
- Carry Handles
- Color Label Printers
- Computer Services, Software
- Coolers; Chillers
- Labels and Packaging
- Oxygen Related Products
- Ozone, UV, R.O. Systems
- PET Plastic
- Plastic Bottle Equipment
- Process Technology
- Trucks and Transportation
- Water Sources (Wells)
- Water Treatment Plants
# Annual Packaged Water Consumption

<table>
<thead>
<tr>
<th>Country</th>
<th>Gallons / Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>7.5</td>
</tr>
<tr>
<td>Mexico</td>
<td>5.0</td>
</tr>
<tr>
<td>China</td>
<td>3.4</td>
</tr>
<tr>
<td>Brazil</td>
<td>3.2</td>
</tr>
<tr>
<td>Italy</td>
<td>2.9</td>
</tr>
<tr>
<td>Germany</td>
<td>2.8</td>
</tr>
<tr>
<td>France</td>
<td>2.2</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2.0</td>
</tr>
<tr>
<td>India</td>
<td>1.6</td>
</tr>
<tr>
<td>Spain</td>
<td>1.5</td>
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</tbody>
</table>
## Packaged Water Consumption, Gallons Per Capita

<table>
<thead>
<tr>
<th>Country</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>51</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>48</td>
</tr>
<tr>
<td>Mexico</td>
<td>47</td>
</tr>
<tr>
<td>Belgium-Luxembourg</td>
<td>42</td>
</tr>
<tr>
<td>Spain</td>
<td>39</td>
</tr>
<tr>
<td>France</td>
<td>37</td>
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<td>Germany</td>
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<td>Lebanon</td>
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<td>Switzerland</td>
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<td>United States</td>
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<td>Cyprus</td>
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<td>Saudi Arabia</td>
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<tr>
<td>Portugal</td>
<td>22</td>
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<tr>
<td>Slovenia</td>
<td>22</td>
</tr>
<tr>
<td><strong>Global Average</strong></td>
<td><strong>7</strong></td>
</tr>
</tbody>
</table>
Regulation of Bottled Water Quality

Proposed (2007) California Water Quality Notice:
- Make available annual *consumer confidence report*
- Label to indicate *source; provide contact information*

International Bottled Water Association (IBWA):
- Opposed to onerous California legislation

*Pepsi* spokesman said *anyone* can find out the true source of *Aquafina* by calling the 800 number on the bottle top.
1994 - Pepsi Water hits the Spot!
Twelve full ounces, that's a lot!

Pepsi tests Aquafina in Wichita, Kansas.

By 2003, Aquafina became the top selling brand in the U.S.

As of 2007, Pepsi acknowledges that the water comes from ‘public sources’.
1999: Coca-Cola

applies secret formulas

and enters global water market with previously unheard-of flavors

Coca-Cola introduces 

Dasani

which becomes

the second largest selling brand in the U.S.

While Dasani bombs as ‘bottled spunk’ in Great Britain,

Coca-Cola boasts sales of

400 varieties of bottled water in

200 countries worldwide.
“Did you know The Coca-Cola Company offers more than 400 brands in over 200 countries?”

“Well, we do!

“From Inca Kola, a soft drink found in North and South America, and Samurai, an energy drink available in Asia; to Vita, an African juice drink, and BonAqua, a water found on 4 continents, our product variety spans the globe!”
Brand Name: BonAqua/BonAqa

Drink Type: Water

BonAqua/BonAqa: BonAqua provides the pure taste of crystal water. Known as BonAqa in some locations, this refreshing product is available carbonated or noncarbonated, depending on location.

Available in the following flavors: Apple, Apple Mint, Cranberry Grapefruit, Guaraná, Lemon, Lemon Lime, Lime, Lingonberry, Lychee, Orange, Pear, Raspberry, Strawberry, Tangerine and **unflavored**.

Available in the following locations: Australia, Azerbaijan, Belarus, Belgium, Brazil, Cape Verde, Comoros, Czech Republic, Democratic Republic of Congo, Ecuador, Estonia, Finland, Germany, Ghana, Guinea-Bissau, Hong Kong, Hungary, Iceland, Italy, Japan, Kazakhstan, Kyrgyzstan, Latvia, Lesotho, Liberia, Lithuania, Macau (Macao), Macedonia, Mauritania, Mayotte, Moldova, Mongolia, Morocco, Namibia, Netherlands, Norway, Peru, Poland, Russia, Slovakia, South Africa, Spain, Sweden, Taiwan, Tunisia, Turkmenistan, Ukraine, Uruguay and Uzbekistan.
In Missouri, the most popular bottled water flavors are: 

*Busch, Budweiser & Michelob.*
**Vitamins B₃, B₆, B₁₂, E, Zinc, Fiber, ...**

Soon! - with Steroids!

---

**The Coca-Cola Company**

*The Coca-Cola Company Virtual Vender*

<table>
<thead>
<tr>
<th>Brand Name:</th>
<th>DASANI Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drink Type:</td>
<td>Water</td>
</tr>
</tbody>
</table>

**DASANI Plus:** DASANI Plus vitamin-enhanced flavored water beverages have zero calories per serving and come in three varieties:

1. **Refresh + Revive:** Kiwi Strawberry Flavor has 10% of the reference daily intake (RDI) per serving of Vitamins B₃, B₆ and B₁₂.

2. **Cleanse + Restore:** Pomegranate Blackberry Flavor contains 10% of the RDI per serving of Vitamins E, B₃, B₆ and B₁₂, plus 1 gram of fiber.

3. **Defend + Protect:** Orange Tangerine Flavor provides 10% of the RDI per serving of Vitamin E and Zinc.

**Available in the following location:** United States.

---

Only in America!
China Water

**Brand Name:** Ice Dew

**Drink Type:** Water

**Ice Dew:** Ice Dew is a bottled water available in China.

**Available in the following flavor:** Unflavored.

**Available in the following location:** China.

Reducing the U.S. - China flavor imbalance ...
Dasani was launched in the UK in January 2004

It was referred to as *bottled spunk* and featured the tagline *can't live without spunk*. In the UK, *spunk* is a euphemism for *semen*. 
Dasani was pulled from the UK market in March 2004

In March 2004, a news article revealed that the tap water of the Town of Sidcup in Kent was being treated, bottled and sold under the Dasani brand name in the UK.

Two weeks later, UK authorities found a concentration of bromate in the product. Coca-Cola recalled half a million bottles and pulled the Dasani brand from the UK market.

Ironically, the bromate was induced by ozonation of the tap water’s bromide ion and was not initially present in the City’s tap water.
Potables of the former USSR

- Alkalinity 2100 mg/l
- Sulfate 800 mg/l
- Chloride 250 mg/l
- Calcium 700 mg/l
- Magnesium 200 mg/l
- Sodium 350 mg/l

- Alkalinity 5000 mg/l
- Chloride 500 mg/l
- Sodium 2100 mg/l
Japan

Here's Nestlé!
Thailand

Ultraviolet?
Vietnam
Vietnam

Still under the influence of French food and water colonialists?
In Vietnam,

Coca Cola brings you Joy!
Store … out of direct sunlight!

or it might turn green?
India - Aqua-Fresh

Enjoy Aqua-Fresh
The guaranteed taste of purity
R.O. + U.V. + Ozonised

Packaged Drinking Water
IS 14543

Indrayani Foods Limited
Reg. Off.: Datta Palace, Pune - Saiara Road,
Balaji Nagar, Pune - 411043,
Factory: Gat No. 475, Dhangarwadi,
(Shirwal), Tal. Khandala, District Satara.
India - Bada Bisleri

20% EXTRA FREE

Bada Bisleri

ONLY

Rs. 12

1.2 L. AT THE PRICE
OF 1 L. BISLERI
Do they put 1.2 liters into a 1 liter bottle?
Compressed water?
India - Himalaya

Mount Everest Mineral Water

Himalayan Groundwater

Do not freeze!
Marketers apparently learned that application of ozonated oxygen to water results in increased oxygen concentrations.
After filtration, reverse osmosis membrane treatment, ultraviolet sterilization, micron filtration and ozonation, this product is deemed ‘best’ for six months.
India - Urja

No refills!
Please Crush the Bottle after Use
Acqua in Italy

Mineral analyses included on packaged water labels

Temperature (at source?) recorded; warm for a groundwater.

No bottled water provides a measure of organic content
Vittel
Official Water
Le de Tour
France
in 100% recyclable PET bottles

No analyses?
Hey, It's just water.
English Carbonated Spring Water appears to be a conventional ground water, while the Florida True Spring Water Product contains no fat.
Water Bottles: Landfill & Litter

2.4 million metric tons of PET (polyethylene terephthalate), derived from crude oil, are used for bottles annually.

In the U.S., 86% goes to landfill or becomes litter.

U.S. consumes 1.5 million barrels of oil annually in production of disposable water bottles.
U.S. PET Production - a plastic bubble?

North America’s largest PET plant,
430,000 metric tons annually
projected to start-up in 2008 in Decatur, Alabama

_Mossi and Ghisolfi Group_ plan
New 800,000 metric ton plant
somewhere in U.S.

Plus 200,000 metric tons
expansion in West Virginia and Mexico

Eastman Chemical opened a
350,000 metric ton plant
in South Carolina in 2007
San Francisco

“No City Purchase of Bottled Water!”

“City ban will help stem global warming, save taxpayer money”

Environmental impact of making, hauling, disposing of bottles

Over a billion bottles end up in California’s landfills each year
2007 Chez Panisse
Berkeley, California
stopped serving bottled water
citing environmental impacts

The Bottled Water *BS Alarm*
has also gone off in:

San Francisco    Seattle
Los Angeles      Minneapolis
Salt Lake City   New York City
Ann Arbor        Boston
St. Louis        Santa Barbara
Berkeley         San Leandro, ...
Starting this spring, City Hall will no longer buy bottled water for employees and plans to cancel the roughly $20,000 it has in contracts with area vendors.

St. Louis sells treated Missouri River drinking water to PepsiCo's north St. Louis facility, which filters it again and sells it as Aquafina for $1.25 a bottle.
Swiss Researchers calculate Environmental Costs of Tap vs. Bottled Waters

Fig. 4.2 Relative Comparison of the Environmental Impact of Bottled Mineral Water vs. Tap Water. The height of the bar indicates the environmental impact of the tap water variants as compared to the corresponding variant for bottled mineral water.
**Arguments re: Bottled Water**

**Aficionado**
- I can taste the difference!
- I am sensitive!
- It is better for you than soda pop!
- You can recycle the plastic!
- I want to protect my family’s health!
- It’s convenient!

**Cynic**
- Ever tried a taste test?
- Can you smell plastic?
- So is tap water!
- Americans don’t recycle!
- From what?
- (Do you know what is in the bottled water?)
- How hard is it to fill a bottle from the tap?
Asks “What's ‘wrong’ with bottled water?”

‘Bottled Water is a Luxury’ In the face of the needs of real people, suffering the real effects of water scarcity, luxury should not be our choice.

‘Bottled Water is Wasteful’ Most luxuries are, but bottled water has enormous costs that rival some of the biggest offenders.

‘The Money Spent Can Be Used Better Elsewhere’ Waste not, and others will want less. Your resources can change someone's life!
lists five reasons not to drink bottled water

• **Bottled water** isn't a good value

• **It is** no healthier than tap water

• **Bottled water creates** trash, litter, landfill

• **Bottled water means** less attention to public systems

• **Leads to the corporatization of water**
Fiji Water - ‘distant and exotic’

Manufacture of a 1 kilogram bottle requires:
- 6.7 kilograms of water and
- 0.85 kilograms of fossil fuel

Shipment (8700 km) to U.S. results in:
- 0.56 kilogram of emissions

Retail Cost: $1.50

After Evian, Fiji is #2 in premium bottled water
Are Water Fountains an Anachronism?

In 2007, the University of Central Florida hosted a home game in their new $54 million football stadium. Ignoring building codes, the stadium had been constructed without water fountains.

More than sixty people were treated for heat exhaustion.
IBWA Decries Bottled Water ‘Activism’

“During the past year, critics of bottled water have become more organized and active, instituting new methods and tactics to attack the industry.”

Corporate Accountability International (CAI)

“…even acknowledges … the support it had from a number of faith-based organizations …”

“They are exploiting the current political climate that supports environmental issues to demonize the bottled water industry.”

“… arm yourself with the facts at www.bottledwater.org”
Cites bottled water consumers’ fears:

- Aging municipal distribution systems,
- Health issues related to the use of chlorine / chloramine,
- Taste of chlorine,
- Fear of contamination from chemical spills, organics, sabotage,
- Health concerns about consumption of soft drinks.
IBWA is now

Pro-choice:

bottled water is about beverage choice

Pro-Environmental:

recycling must focus on all packaging
International Bottled Water Association

IBWA is:

✔ launching a comprehensive ad campaign to respond to the growing threat from activist groups

✔ members are urged to stay alert to critics, misinformation

✔ developing solid relationships with community leaders and elected officials

✔ to counter the misinformation that activists may offer, go to:

www.bottledwater.org
IBWA Turns ‘Green’ - 2008

Nestlé

- will use 30% lighter plastic bottles
- will use 30% smaller labels; *Eco-Shaped* bottles
- bottles will be 100% recyclable and more *compactable*
- is building plants that are *green-building certified*
- will use trucks that are well-maintained, more efficient
- is looking at *hybrid* forms of transportation

IBWA

- joined the *National Recycling Partnership*
- will lobby *govt.* officials to get *efficient* recycling programs
- took full-page ads: NY Times, SF Chronicle
IBWA favors beverage choice will promote recycling advocacy and education

Bottled water ‘taxes’ (deposits) targeting the bottled water industry are ‘missing broad opportunities to put in place sustainable, long-term protective policies that do not discourage the choice of healthy bottled water.’

‘We don’t market to disparage or undermine consumer confidence in tap water. Ours is a beverage choice, not a tap water replacement’

‘It’s not like people will switch from bottled water to tap water. They’ll choose another beverage, or they’ll put something in a cup discarded in the waste stream.’ (V.P. Communications, IBWA)
Recycle your PET?

Coca-Cola reacts to critics

will build world’s largest PET recycling plant, 100 million lbs/year, in Spartanburg, S.C.

Goal

to recycle 100% of its U.S. PET bottles

How? --- by establishing recycling centers throughout the U.S.
promoting curbside collection of PET
In addition to the energy initially used in the manufacture of the virgin PET, recycling adds the costs of material recovery and reprocessing to the environmental burden created by bottling water.

PET bottles that get recycled (and >70% don’t) are first pulverized and rinsed.

Caps and labels are then separated from the mix.

PET flakes are then heat-treated to reduce contaminants.

We now offer bottles made of 100% Recycled material (rPET)
Plastics Recycling Rates Decline in U.S.

“Plastics don't actually recycle.

Instead, they are reprocessed into secondary (usually non-recyclable) products due to their structural/chemical sensitivity, the extremely low cost of virgin plastics, poor product design and materials policy.” — International Plastics Task Force

Despite curbside recycling, the PET recycle rate dropped to 11-year low of 22% in 2001.

With the discard of contaminated material, the PET utilization rate was 18%.
Recycling is a Significant Burden Shifted to Municipalities

“The city's recycling program will be drastically scaled back starting today, as the Bloomberg administration, in a money-saving move, halts the recycling of glass and plastics.”

New York Times, July 1, 2002

It takes about 3-5 times the number of personnel to recycle as to landfill.
U. S. Conference of Mayors - 2008

considers resolution on purchase of bottled water

SUPPORTING MUNICIPAL WATER SYSTEMS

WHEREAS, the United States' municipal water systems are among the finest in the world; and

WHEREAS, high quality, safe drinking water is already available at most public locations; and

WHEREAS, mayors are responsible for delivering safe and affordable water to our citizens; and

WHEREAS, bottled water is regulated by the FDA and municipal tap water is regulated by the EPA and has more stringent requirements for testing; and …
WHEREAS, local governments invest approximately $82 billion a year to provide water and sewer services; and

WHEREAS, bottled water often costs more than an equivalent volume of gasoline, equivalent to 1,000 to 10,000 times more than tap water; and

WHEREAS, up to 40% of bottled water on the market comes from municipal water systems and the bottled water industry generated $15 billion in revenues in 2006 from U.S. consumers; and

WHEREAS, bottled water often travels many miles from the source, resulting in the burning of massive amounts of fossil fuels, releasing CO$_2$ and other pollution into the atmosphere; and

WHEREAS, plastic water bottles are one of the fastest growing sources of municipal waste; and ...
WHEREAS, in the U.S. the production of plastic bottles for bottled water currently requires the energy equivalent of more than 17 million barrels of oil per year – enough to generate fuel for over a million cars for a year – and generates more than 2.5 million tons of carbon dioxide; and

WHEREAS, we applaud the US Conference of Mayors for its National City Water Taste Test, which recognizes all of the great work municipal water systems do for its residents on a daily basis, year after year; and

WHEREAS, the US Conference of Mayors, per Resolution #90 adopted in June 2007, has compiled much information regarding the importance of municipal water and the impact of bottled water on municipal waste.

WHEREAS, the evidence suggests that banning bottled water from government use highlights the importance of municipal water and decreases the impact of bottled water on municipal waste.
NOW, THEREFORE, BE IT RESOLVED, that the US Conference of Mayors encourages cities to phase out, where feasible, government use of bottled water and promote the importance of municipal water.

Resolution 70 Submitted by:

The Honorable Gavin Newsom
Mayor of San Francisco

The Honorable Michael Bloomberg
Mayor of New York City

The Honorable Thomas Menino
Mayor of Boston

The Honorable Laurel Lunt Prussing
Mayor of Urbana

The Honorable Martin Chavez
Mayor of Albuquerque

The Honorable Dan Coody
Mayor of Fayetteville

The Honorable Will Wynn
Mayor of Austin

The Honorable R.T. Rybak
Mayor of Minneapolis

The Honorable David Cicilline
Mayor of Providence

The Honorable Joseph A. Curtatone
Mayor of Somerville

The Honorable Richard M. Daley
Mayor of Chicago

The Honorable Marty Blum
Mayor of Santa Barbara

The Honorable Michael Nutter
Mayor of Philadelphia

The Honorable Manuel Diaz
Mayor of Miami
BPA in Baby Bottles

March 6, 2009 - San Francisco Chronicle:
... six major companies have agreed to stop selling hard-plastic baby bottles containing bisphenol A, an industrial chemical suspected of harming human development ...

... some of the companies have been making bisphenol A-free alternatives, including old-fashioned glass baby bottles ...

Studies in lab animals indicate that even small amounts of bisphenol A can damage brain and reproductive systems, alter mammary and prostate glands and lead to heart disease, obesity and diabetes.
Leaching from Plastic Bottles?

- Mineral water packaged in plastic contains roughly twice the amount of estrogen mimics compared with water sold in glass ...
- Estrogenic compounds have potential adverse health effects ...
- Increased activity in 12 of 20, most of which relied on PET bottles
- Female snails, raised in PET bottles, produced more than double the number of embryos compared with snails raised in glass bottles.

Why is Tap Water Safer?

Public Water Supplies subject to USEPA regulations: 83 MCL parameters

Bottled water (a Food Product) is regulated by the Food and Drug Admin. FDA sets Standards of Quality (SOQ) for food products; weak for water.

Operationally, bottlers may test for only a few quality parameters: e.g., *coliform bacteria, ozone residual, conductivity, pH, fluoride*

Tap Water is fresh, maintains a disinfectant residual, and has not been in contact with untested and unapproved surfaces, such as Bisphenol A.
Better than milk for babies!

Saphia Water - ‘designed’ by a neonatologist in consultation with lactation experts, will be offered in Lovingly Lemon, Pacifying Peach and Bliss Berry flavors at Babies R Us and Motherhood Maternity Stores.
Saphia Water is the first enhanced water created specifically to respond to obstetricians' universal prescription for pregnant women and breastfeeding mothers to drink the equivalent of at least eight, eight-ounce glasses of healthy water daily.

At $45/case, that's $1,832 for 9 months
love = £ 21.99

is all you need ...?
When your water sommelier brings you a Swarovski crystal-studded bottle, it will contain Bling h²o, the most expensive water in the world.

Offered for an exclusive market ‘where water is the new wine’, this $38 per bottle potable is reputedly Paris Hilton’s choice for her Chihuahua.

Your on-line price for the limited edition ‘Christmas’ Bling (750 ml in a crimson and Peridot green bottle) is $40.

Bling h²o is also available in ‘convenient’ plastic bottles.
$55 per bottle - girl not included
Water Babies

Let’s Review the Effect of Evian on your Body

http://www.youtube.com/watch?v=Z1xPPHNZU5I
Bring your Own Bottle?
Eliminate Bottle Transport & Waste

The Boomerang Water Bottling System, if ever deployed near you, promises to “sanitize, fill and cap glass and aluminum bottles of water on site for immediate sale and consumption, thereby eliminating landfill contribution and reducing CO₂ emissions.”
Nutritious Carbohydrates: 50 kilocalories per serving, 2.5 servings per bottle

**Vitaminwater**
(hydrate responsibly)

**formula 50**

50% daily dose
provides 50% of the many important vitamins you need every day (B vitamins, C, E + folic acid).

**Nutrition Facts**

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>8 fl oz (240 mL)</th>
<th>Servings Per Container</th>
<th>2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Per Serving</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Calories</td>
<td>50</td>
<td>% Daily Values*</td>
<td></td>
</tr>
<tr>
<td>Total Fat</td>
<td>0g</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td>0mg</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>13g</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Sugar</td>
<td>13g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td>0g</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ingredients**:
- 100% pure water
- B vitamins
- C
- E
- Folic acid
- Other vitamins and minerals

**Nutrients**

- **Vitamin C**: 20% per serving, 50% per bottle
- **Vitamin E**: 20% per serving, 50% per bottle
- **Vitamin B3**: 20% per serving, 50% per bottle
- **Vitamin B6**: 20% per serving, 50% per bottle
- **Folic Acid**: 20% per serving, 50% per bottle
- **Vitamin B12**: 20% per serving, 50% per bottle
- **Vitamin B5**: 20% per serving, 50% per bottle

*Percent Daily Values are based on a 2,000 calorie diet contains less than 1% juice.
not a significant source of calories from saturated fats, cholesterol, dietary fiber, vitamin A, calcium, or iron.

**No! The calories are from 32.5 g of sugar!**
Propel Fitness Water
Now, with high fructose corn syrup!

Still, Propel contains less sugar, salt, and carbohydrates than its cousin, Gatorade, which offers 50 kilocalories per 240 ml serving.

One sports drink, notably Gatorade, even comes without water. It is also sold as a powder.
FortiFido or PET SWEAT?

Vitamin Water in PET for your PET

HEALTHY BONES
(Peanut Butter Flavored) With Calcium added to help maintain healthy bones in adult dogs. Available in two sizes: 1 liter and 2 liter.

GUARANTEED ANALYSIS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Moisture (max)</td>
<td>99.9%</td>
</tr>
<tr>
<td>Calcium</td>
<td>0.02%</td>
</tr>
<tr>
<td>Pantothenic acid (Vitamin B5) (min)</td>
<td>5 MG/KG</td>
</tr>
<tr>
<td>Niacin (Vitamin B3) (min)</td>
<td>10 MG/KG</td>
</tr>
<tr>
<td>Vitamin B6 (Pyridoxine) (min)</td>
<td>1 MG/KG</td>
</tr>
<tr>
<td>Vitamin B12 (min)</td>
<td>0.015 MG/KG</td>
</tr>
</tbody>
</table>
Bottled Water Insanity Pandemic - 2011

MaMa MiO

from Kraft to their friends on Facebook

‘A liquid water enhancer’
‘because stuff is better when its yours’
‘Add a little. Or a lot.’
‘Whatever works for you.’

Ingredients (Mango Peach):
Malic Acid, Propylene Glycol, Citric Acid, <2% Natural Flavor, Sucralose, Acesulfame Potassium, Potassium Citrate, Polysorbate 60, Yellow 5, Yellow 6, Red 40, Potassium Sorbate.
‘Caffeine-free’, ‘sugar-free’
Sensing a challenge, H₂O’C Engineering is in the process of developing a highly advanced water product having the potential to sell for even more than all other competitors.

Condensed in hydrostatically-fused borosilicate capillaries, \( H_3O’C \) bi-ionic electroneutral polywater promises to be a powerdrink capable of delivering steroids and male enhancement products in undetectable form.

In addition to saving marriages, polywater has already shown its capability for curing cancer and minimizing the effects of the common cold.

What’s in it? Don’t ask; we won’t tell.

But, if you really love your family ... !