

# Bottled Water Scorecard

Bottled water brands  
that treat, test and tell



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## SUMMARY: Bottled water brands that treat, test, and tell

Only 2 of 188 bottled waters surveyed make public 3 basic facts about their products routinely disclosed by municipal water utilities:

- The water's source;
- Purification methods;
- Chemical pollutants remaining after treatment.

The reason: bottled water companies enjoy a regulatory holiday under the federal Food, Drug and Cosmetic Act, which grants them complete latitude to decide what, if any, information about their water is divulged to customers.

In contrast, every one of the nation's 52,000 municipal water suppliers produces an annual water quality report detailing both its water source and pollutant testing results, as required under the federal Safe Drinking Water Act. An estimated 58% of these reports also describe water treatment methods.

Environmental Working Group's 18-month survey of bottled water labels and websites, including top domestic and imported brands, has found that:

- Just 2 bottled waters – Ozarka Drinking Water and Penta Ultra-Purified Water – list specific water sources and treatment methods on their labels, and offer a recent water quality test report on their websites.
- Major bottled water brands obscure basic data about their products. None of the top 10 U.S. domestic bottled water brands label both their specific water source and treatment method for all their products.
  - Aquafina Purified Drinking Water “originates from public water sources” but fails to name them on the label. The water is treated through a process called “HydRO-7™” that is not explained on the label.
  - Arrowhead Mountain Spring Water lists springs in 6 California cities or counties as possible sources for the water we obtained, and gives no information on how or if the water is treated.
  - Crystal Geyser Natural Alpine Spring Water is bottled at “the CG Roxane Source near California’s Mount Shasta” but offers no information on treatment methods.
  - Dasani Purified Water does not name its water source on the label, but notes the water is treated through reverse osmosis.

- Deer Park Natural Spring Water lists 7 towns in Pennsylvania and Maryland as possible locations for the spring water in the bottled we obtained. No treatment method is listed.
  - Ice Mountain Natural Spring Water lists 2 springs in Michigan as possible sources on the label we assessed, and fails to describe its treatment methods.
  - Nestlé Pure Life Purified Water's label indicates that the water is drawn from either a "deep protected " Pennsylvania well or the public water supply of Allentown, PA, and is treated by either reverse osmosis or distillation.
  - Ozarka Drinking Water is drawn from the "Houston Municipal Water Supply" and treated using "reverse osmosis, carbon filtration, microfiltration and ozonation." Ozarka does not label this information on other products. Labels on Ozarka's Natural Spring Water and Aquapod Natural Spring Water list springs in 2 Texas counties as possible sources, and fail to reveal how the water is treated.
  - Poland Spring Natural Spring Water's label lists 6 towns in Maine as possible locations for its spring water and does not give treatment methods.
  - Zephyrhills Natural Spring Water lists springs in 3 Florida counties as possible sources for its water and provides no information on how or if the water is treated.
- Some of these 10 brands market their products with vague terms like "pure," "crisp," and "perfect." These claims are potentially misleading and imply an absence of contamination not possible for the drinking water industry to achieve.

#### **Methodology**

EWG launched an investigation to learn which brands of bottled water tell their customers basic information about the water — where their water comes from, how it is treated, and what contaminants it contains.

Between February and August 2008, volunteers responded to our published email and website requests, and sent to EWG's Washington DC office 163 unique bottled water labels representing 137 brands from 30 states. We created a database detailing the information listed on each brand's label and website.

On January 1, 2009 bottled water brands marketed in California began posting more label and website information required by a new state labeling law. EWG wanted to know how or if the law and the sustained pressure from consumer and public health advocates had affected labeling in other states. In May and June 2009, volunteers sent 85 unique product labels representing 76 brands from 38 states, responding to our renewed requests distributed via email and published on our website. We supplemented our database with this new information.

We graded bottled water brands on how much they tell consumers about what's in the bottle. We failed brands neglecting to provide consumers with significant information on water source, treatment and testing. We compared 2008 and 2009 labels and websites to learn how many brands are telling customers more this year than last. The answer was a heartening 52%, though in nearly every case brands provided less information than tap water suppliers give their customers.

All municipal water systems are required by law to publish water quality test results annually. Only 18% of bottled waters disclose quality reports that include contaminant testing results. Brands that provide this important information to consumers include all 8 Nestlé domestic brands surveyed (Poland Spring, Nestlé Pure Life, Arrowhead , Calistoga, Deer Park, Ice Mountain, Ozarka, and Zephyrhills).

By contrast, Culligan Purified Drinking Water, Refreshe Purified Drinking Water, Giant Acadia Filtered Drinking Water, and 151 other bottled waters offer their customers no water quality test data.

Americans account for less than 5% of the world's population but drink 16% of the bottled water. U.S. bottled water sales rose 85% between 2000 and 2007 (Rodwan 2009), driven by finely-tuned marketing that has exploited consumer anxieties about tap water pollution.

But in 2008, bottled water sales declined for the first time in the decade. This modest 1% drop, retrenching from the previous year's 6% increase in sales (Rodwan 2009), may signal consumers realizing that bottled water is not worth premium prices. Or sagging demand may reflect the struggling economy — or both.

An increasing number of studies raise concerns about plastic bottles' environmental impacts and the purity of their contents. In 2006 Americans threw 36 billion water bottles into trash cans, onto the land as litter or into recycling bins (Doss 2008). The substantial waste management challenge presented by discarded plastic water bottles is frequently in the news.

Last year EWG commissioned tests that found bottled water not necessarily any safer than tap water. Ten brands sampled by EWG contained 38 pollutants ranging from fertilizer residue to industrial solvents. Pollutants in 2 brands exceeded state and industry health standards (EWG 2008).

A number of prominent restaurants, including Del Posto in New York City and Restaurant Nora in Washington DC, now serve filtered tap water instead of bottled water. The city of San Francisco no longer allows employees to purchase bottled water for city business.

Legislation to close loopholes in bottled water standards is under consideration. A California law effective January 1, 2009, requires bottled water companies to post information on the water source, treatment and testing on labels and websites. A bill introduced in the U.S. Senate last year (S 3475) would impose similar requirements nationwide.

Daily decisions on what to drink aren't easy when bottled water companies fail to divulge what's in the bottle. EWG recommends filtered tap water as a first choice. It saves money, it's purer than tap water, and it helps solve the global plastic bottle problem.

We also advocate for the consumer's right to know about bottled water — where it comes from, how and if it's treated, and what contaminants it contains. Bottled water companies should provide this information voluntarily.

## **Bottle vs Tap — The Double Standard**

The Environmental Protection Agency (EPA) calls mandatory annual tap water quality reports the "centerpiece of the right-to-know provisions in the 1996 Amendments to the Safe

Drinking Water Act." Both EPA and state regulatory agencies have authority to take enforcement action against water systems that fail to comply with reporting requirements, "to ensure that consumers' right-to-know is respected by all water suppliers" (EPA 2006a).

When it comes to bottled water, on the other hand, consumers are often left in the dark.

## Where Does the Water Come From?



Federal law requires community tap water suppliers to identify their water sources. In Philadelphia's 2008 water quality report, residents learned that "the water... comes from the Schuylkill and Delaware rivers... Each river contributes approximately one-half of the City's overall supply." Davis, California residents learned that they drank "water from 20 municipal wells and one private well. These wells tap into aquifers beneath the city at depths from 210 to 1,730 feet below ground surface."

### Source water disclosure - What's required?

FDA does not require that bottled water companies name the specific source of the water on the label. Instead, companies can provide generic terms that imply a general source by describing hydrogeology, water collection methods, or treatment methods (21 CFR 165.110). None of these terms give the specific location and name of the water source:

- ❖ "Artesian" and "spring" waters are groundwater under pressure that flows toward the ground surface.
- ❖ "Well water" is pumped from a hole bored, drilled, or otherwise constructed in the ground that taps the water of an aquifer.
- ❖ "Purified water," "deionozied water" or other waters named by treatment method are often municipal waters that have undergone additional treatment.

Companies that package water from a municipal treatment plant without further purifying it must label the water as "from a community water system" or, alternatively, "from a municipal source." Because most water bottlers conduct some additional treatment, they escape this regulation.

Consumers have a right to know much more.

We found that:

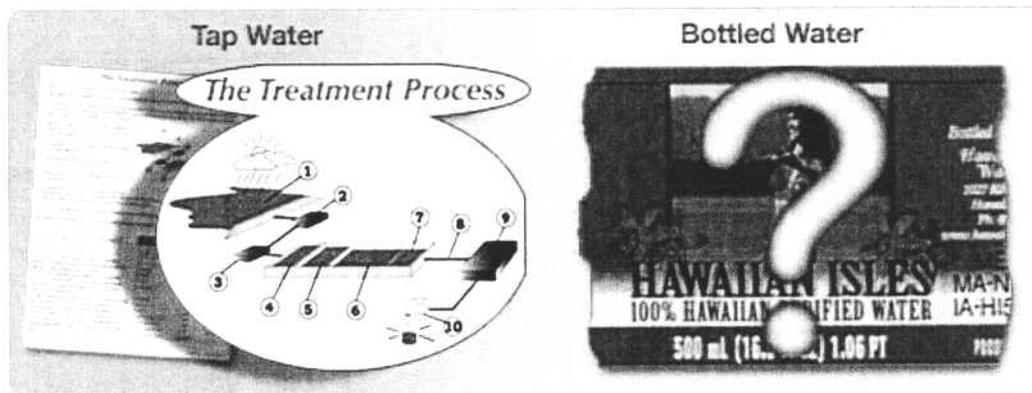
- 30% of bottled waters provide no information on water source whatsoever.
- 33% give generic information like "spring" or "deep pristine crystalline rock aquifer."
- 37% divulge on their label the specific name and location of their water sources. One-sixth of those give a list of possible sources, not the exact source for each bottle.

Many drinking water sources are vulnerable to pollution. Community water systems must report to their customers potential sources of pollution to their water sources, from detailed surveys called Source Water Assessments.

Bottled water companies face no such regulation and are free to make all sorts of hazy marketing claims. Fiji, for instance, claims its Natural Artesian Water is "untouched by man" and "far from pollution." Labels from some brands with undisclosed, mysterious sources claim the water is "essential," "pure," or "crystal-fresh."

Possibly, but it may just be tap water.

### How is The Water Treated?



The federal government does not require bottled water companies to disclose exactly how they have treated their water. Community water suppliers are not required to disclose treatment methods either, but they often do. Our survey of 2008 annual water quality reports found that 58% of 55 water utilities in 48 states and Washington D.C. told their customers how they treated the water.

#### **Water treatment disclosure - What's required?**

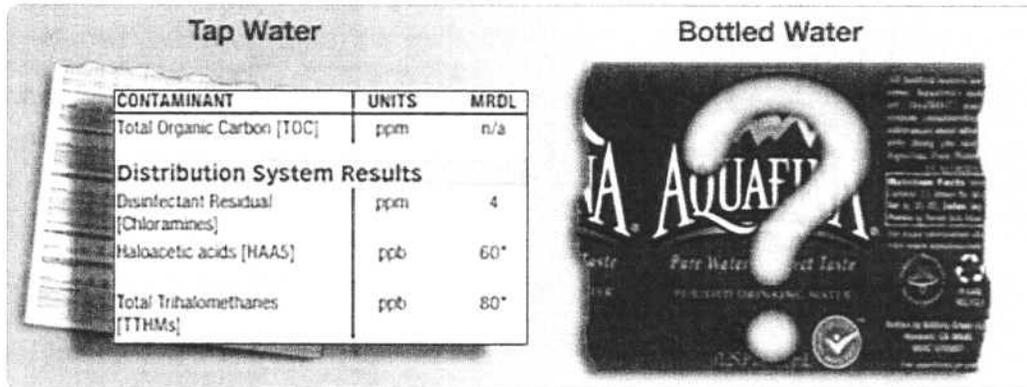
FDA regulations allow bottled waters to label their products with ambiguous terms such as "purified water" or "demineralized water" (FDA 2008a). Unfortunately for consumers, the regulations do not require bottlers to disclose exactly what (if any) treatment processes they employ. Not all treatment methods are equal: consumers have a right to know which methods are used so they can make informed decisions about their drinking water.

Some consumers may believe that bottled water is purer than tap water, but 33% of bottled waters we surveyed provide no information whatsoever on labels or websites about how or if the water is treated. 44% provide no treatment information on labels.

The popular bottled water brand Fiji takes a creative approach to disclosure, claiming that the rainfall replenishing its aquifer is "purified by equatorial winds." But lab tests commissioned by The Boston Globe in 2005 found "unusually high levels" of bacteria in Fiji water (Boston Globe, 2005).

EWG's label research show that among bottled waters that fail to print water treatment information on labels, 60% make unsubstantiated marketing claims of purity, using words like "pristine source." Consumers have no way to know if the claims are true.

### What Pollutants Are in the Water?



Four of every 5 bottled waters do not publish results of water quality testing, according to EWG's analysis of 188 products. For these waters, consumers have no way to know the range and levels of pollutants found in the water.

Few water sources are completely free of detectable contaminants. For example, the estimated 25% of bottled waters that rely on tap water (NRDC 1999) are drawing from supplies that collectively contain at least 260 pollutants, according to EWG's 2002-2005 survey of tap water testing conducted by community water supplies (EWG 2005).

#### Water testing disclosure - What's required?

According to FDA regulations, bottled water companies are required to test their source water for chemical contaminants at least once a year, and for radiological contaminants once every 4 years. Waters taken from non-public water sources must be tested at least once a week for microbiological contamination (FDA 2008b).

While tap water suppliers are required to disclose water quality testing results to their consumers, the FDA only requires that bottlers maintain testing records to show government inspectors (FDA 2002). Some companies voluntarily provide water quality test results to the public, but others withhold this information. Unlike community water systems, bottled water companies are also not required to disclose potential health effects of contaminants that violate standards.

Test results for bottled water may be lacking, but meaningless claims of purity abound. Volvic, for example, advertises that its products are "extremely pure and distinctly different" (Volvic 2009). Ice Mountain Natural Spring Waters boasts that its waters are "pure as the driven snow" (Nestlé 2009a).

The Poland Spring website speaks of "pure quality" and asserts that "our 100% natural spring water is filtered naturally by the earth, captured at the source and continually tested to ensure the

highest quality” (Poland Spring 2009).

What Poland Spring doesn’t tell you is that in 1996, after consumers complained about taste, it recalled some of its bottled water products in Massachusetts because of high chlorine levels. Notably, neither the company nor the local department of health announced the recall (Commonwealth of Massachusetts 2000).

The Poland Spring website recounts its source’s legendary curative powers, saying that in 1793, the spring cured a man on his death bed; reinvigorated, he lived 52 more years (Nestlé 2009b).

Mountain Valley Spring Water boasts on their website that by the early 1900’s the brand’s source water had become well known as a remedy for gout, rheumatism, diabetes and kidney disease (Health Waters 2009).

Aquamantra Natural Spring Water takes the prize for imaginative marketing. The company asserts that its water “resonates with the energy and frequency of well-being.” According to Aquamantra, the quality of the drinker’s thoughts determines the quality of the water. The labels contain affirmative mantras that, according to the company, “actually change the molecular structure of the water, and most definitely change the flavor of the water” (Aquamantra 2009).

## Recommendations

Consumers spend up to 1,900 times more for a bottle of water than the same amount of tap water, yet rarely have basic information about the product (EWG 2008).

EWG recommends that bottled water labels and websites disclose the same information that the law requires of municipal water utilities. We recommend that government officials make this disclosure mandatory.

Bottled water companies should:

- Provide easy-to-access water quality reports disclosing all test results and containing the information required in Consumer Confidence Reports for tap water suppliers.
- List on the label water treatment methods; and clear, specific information on the water source and location.
- Test for unregulated chemicals that may leach from plastic bottles.

We urge consumers to make their first choice filtered tap water. They should consider bottled water a distant second, and then they should pick brands that provide full water source, treatment and quality disclosure and that use advanced treatment methods to remove a broad range of pollutants.

## SECTION 1: Bottle vs. Tap - Double Standard

Ask bottled water consumers whether they think a bottled water is being held to significantly tighter standards than tap water, and chances are they will say, "Of course."

That's what the FDA is for, right?

Wrong. The truth is, the government does not mandate that bottled water be any safer than tap water. In fact, the chemical pollution standards are nearly identical. The sole exception is lead: FDA's lead limit for bottled water is three times stricter than the EPA lead standard for tap water. EPA's more lenient standard takes into account the fact that many older houses have lead pipes and lead solder (FDA 2008a; FDA 2002).

It's rare that FDA inspectors visit bottled water plants. The agency's website acknowledges that "bottled water plants generally are assigned low priority for inspection" (FDA 2002).

This lack of oversight has come at a price. Two brands have been recalled by FDA in the past 8 years: Safeway Select in 2001 because of contamination with particulate matter (FDA 2001), and Sam's Choice in 2005 due to mold and bacterial contamination (FDA 2005). Increasing FDA's pace of inspections would provide a much higher chance for these types of problems to be uncovered.

### **Extensive right-to-know provisions for tap water, absent for bottled water**

Since 1999, the vast majority of community water systems around the country have been required to distribute to their customers an annual drinking water quality report, called a "consumer confidence report" (CCR). At a minimum, these CCRs disclose (EPA 2006a):

- The location and name of the lake, river, aquifer, or other source of the drinking water;
- A brief summary of the susceptibility to contamination of the local drinking water source, based on the source water assessments by states;
- Instructions on how to get a copy of the water system's complete source water assessment;
- The level (or range of levels) of any contaminant found in local drinking water, as well as EPA's health-based standard (maximum contaminant level) for comparison;
- The likely source of that contaminant in the local drinking water supply;
- The potential health effects of any contaminant detected in violation of an EPA health standard, and an accounting of the system's actions to restore safe drinking water;
- The water system's compliance with other drinking water rules;
- An educational statement for vulnerable populations about avoiding *Cryptosporidium*;
- Educational information on nitrate, arsenic, or lead in areas where these contaminants may be a concern; and

- Phone numbers of additional sources of information, including the water system and EPA's Safe Drinking Water Hotline.

Because finding accurate, complete information about many bottled water products on the market is nearly impossible, it's clear that many bottled water consumers are choosing products blindly.

### **FDA's history of foot dragging in bottled water regulations**

The FDA has dragged its feet for years in setting strict water quality standards for bottled water and in requiring basic right-to-know disclosure for consumers. The FDA has regulated bottled water in some manner since the federal Food, Drug and Cosmetic Act (FD&CA) was passed in 1938. These regulations addressed little more than ensuring basic sanitary operation and record keeping. In 1974, the agency developed its first bottled water quality standards (GAO 1991).

Under section 410 of FD&CA, the FDA has been required either to apply EPA standards for drinking water contaminants to bottled water or explain why not. Yet a 1991 investigation by the Government Accountability Office found that between 1976 and 1991 the FDA had not complied with this requirement once (GAO 1991). After EPA regulated 7 volatile chemicals regulated in drinking water, FDA delayed for almost 3 years before proposing standards for the same chemicals in bottled water.

This problem was finally addressed in 1996 when Congress modified the law, through amendments to the Safe Drinking Water Act, to say that if the FDA did not issue bottled water regulations for newly regulated contaminants in drinking water, the EPA's tap water standards would automatically apply (FDA 2009). In 1995, the FDA issued "identity standards" for bottled water. For the first time, bottled water labeled as "spring," "artesian," or "purified" water, for example, had to meet certain requirements or be deemed "misbranded" and subject to recall (FDA 2008a).

Despite Congressional efforts, bottled water standards remain behind rules for tap water. In 1996 Congress amended the Safe Drinking Water Act to require, among other things, that community water systems provide customers with annual water quality reports containing extensive information on water source, contaminant levels, potential sources of contaminants, potential health effects of contaminants and educational advice for vulnerable populations.

The 1996 Safe Drinking Water Act Amendments required the FDA to conduct a feasibility study for providing similar information about bottled water. The agency collected comments beginning in 1997 and in 2000 published its findings in a report titled "Feasibility of Appropriate Methods of Informing Customers of the Contents of Bottled Water" (EPA 1997).

In its report, the FDA concluded that it would be appropriate and feasible to require one of the following: (a) information on bottled water labels that would tell consumers how to obtain water quality information from the manufacturer, (b) some water quality information on

bottled water labels and the remainder available through contact with the company, or (c) an information package with bulk distributed with water deliveries.

More than 12 years after it began, the FDA has still not filled this gap in public information.

### **New California law requires some additional disclosure for bottled water**

In 2007, California passed a law (SB 220, Corbett) requiring bottled water companies to disclose some basic right-to-know information to consumers. In order to be sold in California, all bottled water manufactured after January 1, 2009 must have a label that gives consumers at least two ways to contact the manufacturer and request a water quality report. This report must include, among other things:

- The source of the bottled water, "consistent with applicable state and federal regulations";
- A brief description of the treatment process;
- A reference to the FDA web site that provides product recall information;
- The bottled water company's address and telephone number "that enables customers to obtain further information concerning contaminants and potential health effects";
- Information on "the levels of unregulated substances, if any, for which water bottlers are required to monitor pursuant to state or federal law or regulation";
- The number for the FDA's Food and Cosmetic Hotline for customers to call if they have questions about contaminants or potential health effects;
- A statement explaining how some people may be more vulnerable to contaminants in drinking water and directions to these consumers about how they can lessen the risk of infection by microbial contaminants;
- A statement explaining the various types of contaminants that may be present in the bottled water and what their sources may be;
- Statements about the health effects of nitrate and arsenic if the levels in the bottled water exceed certain thresholds.

EWG's review of bottled waters purchased in 2008 and 2009 show that many companies have updated their labels in the last 12 months to comply with California law.

But while California's effort represents an important step in the right direction, much remains to be done. The label is not required to give treatment information. And a loophole in the California law allows bottlers of treated tap water to give less information in their water quality reports. Rather than disclosing test results from the finished product, these companies are allowed to use the results from the applicable utility's consumer confidence reports. This means that even if consumers went to the trouble of obtaining water quality reports, they still might not be able to find out whether the bottled water in question is superior to tap water.

Finally, California law obviously only applies to waters sold in the state, meaning that a vast array of brands sold elsewhere are not covered.

## SECTION 2: Where Bottled Water Comes From

EPA requires community water systems to disclose the name and location of the lake, river, aquifer, or other source of their drinking water in their annual Consumer Confidence Reports (CCRs).

### Tap water source disclosure: short, simple, informative

The following quotes, taken from 2007 and 2008 Consumer Confidence Reports from around the country, demonstrate how water utilities can provide remarkably specific and informative source data in just one to three sentences:

- Davis, CA — “During 2007, the City pumped water from 20 municipal wells and one private well. These wells tap into aquifers beneath the city at depths from 210 to 1,730 feet below ground surface.” (City of Davis Public Works 2008)
- Austin, TX — “Customers of the City of Austin Water Utility... receive their drinking water from two water treatment plants that pump surface water from the Colorado River as it flows into Lake Austin.” (Austin Water Utility 2009)
- Philadelphia, PA — “The water that we treat comes from the Schuylkill and Delaware rivers. Rivers are surface water supplies. Philadelphia does not use groundwater. Each river contributes approximately one-half of the City’s overall supply.” (Philadelphia Water Department 2009)
- Sacramento, CA — “The City of Sacramento has two independent water sources. Our primary water source is river water from the American and Sacramento Rivers, which provide 85 percent of our water supply. Groundwater provides the remaining 15 percent.” (City of Sacramento 2009)
- Tampa, FL — “The Hillsborough River is the surface water source that supplies most of Tampa’s water demand, an average of 82 million gallons a day. During our dry season, usually April through June, Tampa’s river supply is supplemented by the Aquifer Storage and Recovery (ASR) system and regional groundwater, surface water and desalinated seawater purchased from Tampa Bay Water.” (Tampa Water Department 2009)

Community water systems are also required to notify consumers of any existing source water assessments and how to obtain them. These assessments pinpoint current and potential sources of pollution in the water source. In certain cases, systems are also required to provide a brief summary of the assessment in the CCR.

Overall, EWG found that 23% of products surveyed contained no source information on either the labels or available websites.

Nearly a third of the bottled water labels we examined, including leading bottled water brands such as Dasani Purified Water and Perrier Sparkling Natural Mineral Water, offered no information about the water's source, generic or specific. Until recently, the major brand Aquafina also fell into this category. However, after extensive pressure from Corporate Accountability International and other consumer groups, Aquafina agreed to modify its labels to say that the water is sourced from unnamed public water supplies.

A third of the labels we inspected included partial or vague source locations, providing the consumer with little or no useful information. Aquamantra Natural Spring Water, as the name implies, sourced from a spring identified on the label as in zip code 92707. The labels of Voss Artesian Water and Meijer Natural Spring Water identify their water sources as "Vatnestrom, Norway" and "deep within Michigan's countryside," respectively.

FDA requires that if the water comes from an underground aquifer, companies may advertise their product as artesian water, ground water, spring water or well water, depending on how the water is tapped or how it flows to the surface. Companies may advertise their product as mineral water if it is ground water that naturally contains 250 or more parts per million of total dissolved solids.

A few brands stand out for source disclosure.

National brands Ozarka and Poland Spring were among the minority of brands that disclosed precise source locations on their labels. Only 69 of the 188 products (37%) analyzed revealed precise sources, such as the name of the spring or aquifer tapped. Poland Spring Natural Spring Water named six springs in Maine from which the water may have been extracted. Ozarka's Natural Spring Water and drinking water products named the springs and community water system from which the water was taken.

Websites of bottled water brands were no more informative.

More than half of the products EWG investigated had no websites. This resource void was especially pronounced among private label brands, including CVS Gold Emblem, American Fare, Kirkland Signature and Holiday Pantry.

For 9% of the products analyzed, including Nursery Purified Water for infants, websites had no any information on water sources.

Websites of another 28% of the products we analyzed listed ambiguous source locations.

Only 9% of the 188 products analyzed had a website disclosing clear, precise water sources. Among these were New Zealand Eternal Artesian Water and Iceland Spring Natural Icelandic Spring Water, both imported. Of that 9%, 1 in 3 provided a list of possible sources, leaving consumers to guess exactly which sources were used to fill a particular bottle.

Manufacturers of just 6% of the products in this investigation provided precise source information on both their product labels and websites. These included Deer Park Natural Spring Water and Evian Natural Spring Water.

## SECTION 3: How Bottled Water Is Treated

Federal law does not require information about treatment methods to be distributed to consumers for either bottled water or tap water, but EWG's analysis shows that some community water systems voluntarily give such information in their annual Consumer Confidence Reports (CCRs) more often than bottled water companies do on their product labels.

EWG reviewed the most recent Consumer Confidence Reports available for 55 medium to large cities in 48 states. While the level of detail of information varied tremendously, we found that 58% of the CCRs contained at least some substantive information on municipal utility treatment methods.

In fact, many water quality reports devote half a page or more to explaining the treatment process to consumers. A few community water systems don't treat their water. Their CCRs explain why.

We found no obvious relationship between the size of the community water system and the adequacy of disclosure of treatment information. Treatment information disclosure isn't a matter of resources, but a matter of choice. Some very large systems, such as those in San Diego and Cleveland had no substantive treatment information in their CCRs, but smaller systems such as those in Davis, CA and Anniston, AL did.

The story is little different when it comes to bottled water. EWG found that the labels of 44% of the bottled waters we analyzed lacked any information about treatment methods. These products not only included small, private label brands such as Henry's Farmers Market and Macy's, but also national brands such as Deer Park Natural Spring Water, Ice Mountain Natural Spring Water, Zephyrhills Natural Spring Water and Crystal Geyser Natural Alpine Spring Water.

Websites of bottled waters are only slightly more informative. Those of about a quarter of the products EWG investigated had information on water purification. Another 21% sites contained vague or no information on this subject.

The remaining 54% had no websites at all.

Overall, two-thirds of bottled water products provided some degree of information on how their water was purified either on the product label or on a website.

### **FDA's weak treatment disclosure rules**

While FDA's rules don't universally require treatment information, the agency does have a few minimal requirements. Water labeled "distilled" must actually be distilled. To be labeled "purified," a bottled water must meet certain standards – though the actual treatment method

need not be disclosed. To label a product "sterile water," the bottler must meet certain purity standards, although the actual treatment method need not be disclosed.

Weak FDA standards for bottled water impede consumers' ability to follow the Centers for Disease Control's (CDC) advice that people with compromised immune systems to drink bottled water treated using reverse osmosis, distillation, and/or filtration with an absolute 1 micron filter (absolute indicates the largest hole in the filter). These three methods are known to protect against *Cryptosporidium*, a parasite that can lead to severe illness or even death in people with a weakened immune systems (CDC 2008). But, other than for distilled water, nothing in FDA's rules compels companies to disclose their treatment methods.

EWG recommends that if consumers need to buy bottled water, they choose a brand that provides them with information on treatment methods and uses some kind of advanced treatment.

## SECTION 4: Pollutants in Bottled Water

Under the federal Safe Drinking Water Act, all annual water quality reports (Consumer Confidence Reports) issued by community water suppliers must (EPA 2006b) report:

- Levels of all regulated contaminants, any unregulated contaminants for which monitoring is required, and any disinfection by-products or microbial contaminants for which monitoring is required.
- Likely source(s) of all detected contaminants, to the best of their knowledge.
- Federal Maximum Contaminant Levels (federal drinking water standards) and Maximum Contaminant Level Goals (theoretical federal standards if only health concerns were taken into consideration and economic concerns and technical feasibility were not considered) for each contaminant detected.
- Extensive statements on contaminants and their likely sources, including microbial contaminants, inorganic contaminants, pesticides and herbicides, organic chemical contaminants, and radioactive contaminants.
- Potential health effects associated with arsenic, nitrate, lead, and the disinfection byproducts known as trihalomethanes if detectable levels are below the MCL but above certain health-based thresholds of concern.

These rules cover all public water systems with at least 15 service connections or that regularly serve 25 year-round residents (EPA 2006c).

In contrast, bottled water companies, which sell their products to thousands or millions of people, are not required to make public any of this.

Because of the California law that recently went into effect, a few more bottled water companies seem to be making available more water quality information. However, EWG's analysis shows that these companies remain in the minority. EWG found that none of the 163 labels dating from 2008 indicated the availability of water quality reports were available, but 14% of the 2009 labels contained such information.

Only 20% of bottled water company websites indicated that water quality testing had been conducted. Just 18% – including Poland Spring, Nestlé Pure Life and Perrier – showed current bottled water quality reports, including contaminant testing results, on websites.

## SECTION 5: California beefs up bottled water labeling

California's SB 220 requires bottled water companies to label the name and location of their water source, and to provide consumers with water quality testing reports upon request, effective January 1 2008. EWG assessed the extent to which this law affected labeling practices nationwide.

We compared 2008 and 2009 labels from 54 bottled water products, and found that more than half of these products are providing more information, with many of them complying with the new California requirements:

- 28 bottled water brands gave customers more information in 2008 than in 2009 (Table 1).
- 7 bottled water brands gave customers less information in 2008 than in 2009 (Table 2).
- 19 bottled water companies gave customers the same information in 2008 as in 2009 (Table 3).

**Table 1: 28 bottled water brands gave customers more information in 2008 than in 2009**

| Product  | 2008   | 2009  | Labels sent from?                                  |
|--|--|---|--|
| Sparkletts<br>Crystal-Fresh<br>Purified<br>Water | Label did not guide consumers to water quality information           | Label provides consumers with a phone number and website to get information on water quality  | CA   |
| Poland<br>Spring<br>Natural<br>Spring            | Water Vague source information on website: Ancient aquifers in Maine | Detailed source information on website: "Spring water sources: Poland Spring, ME; Clear Spring, Hollis, ME; Evergreen Spring, Fryeburg, ME; Spruce Spring, Pierce Pond Township, ME; Garden Spring, Poland, ME; Bradbury Spring, Kingfield, ME and/or White Cedar Spring, Dallas Plt, ME" | NY; MA; NJ; VA; ME                                 |
| 365<br>Everyday<br>Value<br>Spring<br>Water      | Label did not guide consumers to water quality information           | Label provides consumers with a phone number and email address to get information on water quality  | AZ (2009 label from NC showed no change from 2008) |
| Ozarka<br>Natural<br>Spring                      | Vague source information on website: Various east-Texas              | Detailed source information on website: "Various east-Texas springs located in Henderson, Walker and Wood counties:   | TX; MS; KS; OK                                     |

Table 1 continued: 28 bottled water brands gave customers more information

| Product                         | 2008  | 2009  | Labels sent from?  |
|---------------------------------|---|---|--|
| Water                           | springs located in Henderson, Walker and Wood counties  | Roher Spring, Henderson County, TX; Moffit Spring, Walker County, TX; Piney Woods Springs, Wood County, TX; Clear Springs, Wood County, TX"   |  |
| Nestlé Pure Life Purified Water | No source information provided on label   | Source information provided on label: "Deep protected well, [Breinigsville, PA and/or Public Water Supply, Allentown, PA] [Ontario, CA] [Hollis, Maine]"  | CT; MD; CA (2009 label from TX showed no change from 2008) |
| Nestlé Pure Life Purified Water | Label did not guide consumers to water quality information  | Label provides consumers with a phone number and website to get information on water quality  | CT; MD; CA (2009 label from TX showed no change from 2008) |
| Spring! Natural Spring Water    | No information on water purification process available on website   | Water purification process detailed on website: "Microfiltration, Ozonation, Ultra Violet Light (UV) disinfection" OH; UT   |  |
| Arrowhead Mountain Spring Water | No source information given on label and only vague source information available on website: "The sources range from the natural springs in US to Canada including sources in a watershed outside of San Francisco" | Both label and website name the water sources. Label: "Arcadia Spring, Calistoga, CA; Lukens Spring, Baxter, CA; Sopiago Spring, El Dorado County, CA; Sugar Pine Spring, Long Barn, CA; White Meadows Spring, Pacific House, CA; Rainbow Lodge/Royal Gorge, Soda Springs, CA; Hope Springs, BC, Canada; SP Spring, Riverside County, CA; Arrowhead Springs, San Bernardino County, CA; Long Point Ranch, Running Spring, CA; Palomar Mountain Granite Springs (PMGS), Palomar, CA; Deer Canyon Springs, San Bernardino County, CA; Coyote Springs, Inyo County, CA". Website: "Arcadia Spring, Calistoga, CA; Lukens Spring, Baxter, CA; Sopiago Spring, El Dorado County, CA; Sugar Pine Spring, Long Barn, CA; White Meadows Spring, Pacific House, CA; Rainbow Lodge/Royal Gorge, Soda Springs, CA; Hope Springs, BC, Canada; SP Spring, Riverside County, CA; Arrowhead Springs, San Bernardino County, CA; Long Point Ranch, Running Spring, CA; Palomar Mountain Granite Springs (PMGS), Palomar, CA; Deer Canyon Springs, San Bernardino County, CA; Coyote Springs, Inyo | AZ; CA   |

Table 1 continued: 28 bottled water brands gave customers more information

| Product                                   | 2008   | 2009   | Labels sent from?  |
|---|--|--|--|
|   |  | County, CA"  |  |
| Arrowhead Mountain Spring Water           | Label did not guide consumers to water quality information   | Label provides consumers with a phone number and website to get information on water quality   | AZ; CA   |
| Kirkland Signature Premium Drinking Water | Label did not guide consumers to water quality information   | Label provides consumers with a phone number and website to get information on water quality   | CA; CO   |
| Deer Park Natural Spring Water            | Vague source information available on website: Original source in Appalachian Mountains outside of Deer Park, Maryland plus additional undisclosed locations | Detailed source information provided on website: "Frontier located in New Tripoli, PA, Bangor, PA, Stroudsburg, PA, Hegins, PA, South Coventry, PA, Pine Grove, PA Newmanstown, PA and/or Oakland, MD; Spring of Life, Lake County, FL and/or Crystal Springs, Pasco County, FL; White Springs, Liberty County, FL and/or Blue Springs, Madison County, FL; Glenwood Spring, St Albans, ME; Sweetwater Falls, Hohenwald, TN" | DC; VA; OH; GA   |
| Dasani Purified Water                     | Label did not guide consumers to water quality information   | Label provides consumers with a phone number and website to get information on water quality   | CA; MI; OR (2009 labels from DC, CA, VA, OH and GA showed no change from 2008) |
| Fiji Natural Artesian Water               | Website did not provide details on purification  | Website provided details on purification techniques used to treat the water: "the water is filtered, microfiltered and ultra violet light is applied" WI; VA; TX   |  |
| Fiji Natural Artesian Water               | Label did not guide consumers to water quality information   | Label provides consumers with a phone number and website to get information on water quality   | WI; VA; TX   |
| Glaceau Smart Water                       | No information on water source available on website  | Vague information on water source available on website: "Most facilities that purify and bottle smartwater procure water from municipal water systems. At a few plants, however, water is obtained from protected groundwater sources managed by the bottling plant, with approvals from local authorities."   | CA   |
| Kirkland Signature                        | No purification information available on   | Purification information provided on product website: "Advanced filtration,  | NM   |

Table 1 continued: 28 bottled water brands gave customers more information

| Product   | 2008   | 2009  | Labels sent from?                                       |
|---|--|---|---|
| Mountain Spring Water   | product website  | Ozonation and Reverse Osmosis Technologies"   |   |
| Zephyrhills Natural Spring Water                                    | Vague source information available on website: Springs in Florida plus additional spring sources | Detailed source information available on website: "Crystal Springs, Pasco County, FL; Cypress Springs, Washington County, FL and/or Blue Springs, Madison County, FL"   | FL  |
| Market Pantry Purified Water  | Label did not guide consumers to water quality information                                       | Label provides consumers with a phone number and website to get information on water quality  | AR  |
| Ice Mountain Natural Spring Water                                   | Vague source information on website: Several "unique springs" in the Northern United States      | Detailed water sources given on website: "Sanctuary and Evert Springs, Stanwood, MI; Frontier Springs located in New Tripoli, PA, Bangor, PA, Hegins, PA, South Coventry, PA, Pine Grove, PA, Stroudsburg, PA and /or Oakland, MD; Glenwood Spring, St Albans, ME; Sweetwater Falls, Hohenwald, TN; Bennett Hill Spring, Red Boiling Springs, TN" | MO; IL  |
| Crystal Geyser Natural Alpine Spring Water                          | Label did not guide consumers to water quality information                                       | Label provides consumers with a phone number and email address to get information on water quality  | WA  |
| Crystal Springs Natural Mountain Spring Water                       | Vague source information available on product label: Springs, Blue Ridge, GA                     | Detailed water source given on the product label: "Tablerock Spring, Morganton, NC 28655"   | NC  |
| Sam's Choice Purified Drinking Water with Flavor Enhancing Minerals | No water quality report available on website   | Water quality report available on website with information on source, treatment and water testing results   | NC; OK  |
| Sam's Choice Purified Drinking Water with                           | Label did not guide consumers to water quality information                                       | Label provides consumers with a phone number and website to get information on water quality  | NC; OK (2009 label from VA showed no change since 2008) |

Table 1 continued: 28 bottled water brands gave customers more information

| Product   | 2008   | 2009   | Labels sent from?   |
|---|--|--|---|
| Flavor Enhancing Minerals                       |  |  |   |
| Stater Bros. Pure Water Purified Drinking Water | No information available on product label about water source | Vague water source information available on product label: "deep protected wells in southern California" | CA  |
| Stater Bros. Pure Water Purified Drinking Water | Label did not guide consumers to water quality information   | Label provides consumers with a phone number to get information on water quality                         | CA  |
| Evian Natural Spring Water                      | Label did not guide consumers to water quality information   | Label provides consumers with a phone number and website to get information on water quality             | CA (2009 labels from IL and OR did not change since 2008) |
| Refreshed Purified Drinking Water               | No website available to inform consumers about product       | Website available with information on the purification process and water testing                         | CA  |
| Refreshed Purified Drinking Water               | Label did not guide consumers to water quality information   | Label provides consumers with a phone number and website to get information on water quality             | CA (2009 labels from DC, OR and VA unchanged since 2008)  |
| Volvic Natural Spring Water                     | Label did not guide consumers to water quality information   | Label provides consumers with a phone number and website to get information on water quality             | FL  |
| Camelot Purified Water                          | No source information given on product label                 | Source information given on product label: "Lafayette Spring, Lafayette TWP, WI"                         | WI  |
| Camelot Purified Water                          | No purification information given on product label           | Purification information given on product label: "purified by reverse osmosis" WI                        | WI  |
| Trader Joe's Pure New Zealand Artesian Water    | Label did not guide consumers to water quality information   | Label provides consumers with a phone number and email address to get information on water quality       | CA  |
| Hinckley Springs Spring Water                   | Label did not guide consumers to water quality information   | Label provides consumers with a phone number and website to get information on water quality             | KS  |
| Nursery Purified                                | No source information included on label                      | Label details water sources: Arrowhead Springs; Millcreek Township,                                      | DC; CA  |

Table 1 continued: 28 bottled water brands gave customers more information

| Product                                       | 2008   | 2009   | Labels sent from? |
|---|--|--|-------------------|
| Water   |  | PA/Diamond Spring; Clat Township, PA/<br>Ephrata Well; Ephrata Township,<br>PA/West Earl Township Municipal Water<br>Supply; Ephrata, PA |                   |
| Nursery<br>Purified<br>Water                  | Label did not guide<br>consumers to water<br>quality information | Label provides consumers with a phone<br>number and website to get information<br>on water quality                                       | DC; CA            |
| Earth2O<br>100%<br>Natural<br>Spring<br>Water | Label did not provide<br>information on water<br>purification    | Label provides information on water<br>purification: "100% naturally filtered" CA  |                   |
| Essentia<br>Purified<br>Drinking<br>Water     | Label did not guide<br>consumers to water<br>quality information | Label provides consumers with a phone<br>number to get information on water<br>quality   | CA                |
| Refreshe<br>Spring<br>Water                   | Label did not guide<br>consumers to water<br>quality information | Label provides consumers with a phone<br>number to get information on water<br>quality   | CA                |
| Refreshe<br>Spring<br>Water                   | No website available to<br>inform consumers about<br>product     | Website available with information on<br>the purification process and water<br>testing   | CA                |

**Table 2: 7 bottled water brands gave customers less information in 2008 than in 2009**

| Product   | 2008   | 2009   | Labels sent from?  |
|---|--|--|--|
| Kroger Purified Drinking Water                  | Label provided information on purification type: Reverse Osmosis   | Label did not provide information on purification type               | AR (2009 labels from OH and MI were unchanged from 2008) |
| Kirkland Signature Mountain Spring Water        | Vague source information available on product label: Polk County, Tennessee  | No source information available on product label                     | NM   |
| Acqua Panna Natural Spring Water                | Website provides precise source information: Acqua Panna Spring, Tuscany Website provides vague source information: "sources are located 3,700 feet high in the serene Apennines Mountains of Tuscany" | FL   |  |
| Mountain Valley Spring Water                    | Website listed purification techniques used to treat the water   | Website did not list purification techniques used to treat the water | FL   |
| Wegmans Spring Water                            | Label includes vague information about water source: "the CG Roxane Spring source, Moultonborough, CG Roxane, NH 03254"  | Label does not disclose water source                                 | NY   |
| New Zealand Eternal Artesian Water- Silica Rich | Label includes vague source information: "New Zealand Aquifer"   | No source information disclosed on label                             | KS   |
| Hinckley Springs Spring Water                   | Vague source information given on product label: Spring, Rock Springs, WI  | No source information given on product label                         | KS   |

**Table 3: 19 bottled water companies gave customers the same information in 2008 as in 2009**

| Product  | States labels sent from |
|--|-------------------------|
| Aquafina Purified Drinking Water               | CA; KS; NE; CT; PA; CO  |
| Simply H2O by Berkley & Jensen Purified Water  | FL                      |
| Ethos Water Natural Spring Water               | FL                      |
| Voss Artesian Water                            | VA                      |
| Icelandic Glacial Natural Spring Water         | VA                      |
| American Fare Purified Water                   | PA                      |
| Naturally Preferred Pure Mountain Spring Water | OH                      |
| Springtime Artesian Water                      | MS                      |
| Absopure Natural Spring Water                  | KS                      |
| Evamor Alkaline Artesian Water Beverage        | MO                      |
| CVS Gold Emblem Natural Spring Water           | DC                      |
| Iceland Spring Natural Icelandic Spring Water  | DC; VA                  |
| Trader Joe's Mountain Spring Water             | IL                      |
| Perrier Sparkling Natural Mineral Water        | CA                      |
| Contrex Natural Mineral Water                  | CA                      |
| Hawaii Water Ultra-Pure Bottled Water          | CA                      |
| Gerolsteiner Natural Mineral Water             | DC; CA                  |
| 365 Everyday Value Electrolyte Enhanced Water  | DC; CA                  |
| Whole Foods Market Italian Still Mineral Water | DC; CA                  |

## SECTION 6: Methodology

Interested in finding out how much information bottled water companies make available to their consumers, in February 2008 EWG invited the public to send labels from bottled waters that they had purchased. Between February and August 2008 we received 163 unique product labels representing 137 brands from 30 states.

EWG's researchers logged into a database the details of information on the label regarding water source, treatment and testing. We recorded similar data from company websites.

In January 2009, California's SB 220 went into effect, requiring all bottled waters sold in that state to include on their label the source of the water and contact information for consumers to obtain a report on water quality. Aware that this new rule would prompt changes in the bottled water industry, in May 2009 EWG again invited the public to send us labels of bottled water purchased after the law went into effect. In May and June 2009 we received 85 unique product labels representing 76 brands from 32 states.

We logged the details from this set of labels and corresponding websites into the EWG database and dated the entries appropriately. The final database, a combination of information from products purchased before and after SB220's effective date, consisted of 188 products from 155 brands and 38 states.

EWG researchers analyzed the information in the database and scored each product based on: 1) the transparency of bottled water company with regards to disclosing source, purification and testing information on both their product label as well as on their website, and 2) the efficacy of purification methods used to treat the water. Final scores for each of the 188 products EWG assessed will be available July 2009 at <http://www.ewg.org/health/report/bottledwater-scorecard>.

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## *Education*

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### **Georgia Institute of Technology, Atlanta, Georgia**

Master of Science in Civil Engineering, 1988; Bachelor of Science in Civil Engineering, 1987

### **Stanford University, Palo Alto, California**

Post Graduate Studies in Environmental Engineering, 1990-1991

## *Experience*

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### **Environmental Working Group (EWG)**

**Washington, D.C.**

#### **Senior Vice President for Research**

**May 1998 to present**

Directs research programs at environmental and public interest non-profit, overseeing and conducting studies, including environmental and human health assessments focused on industrial chemicals, and consumer product safety investigations. Serves as expert for environmental and public health community on national television and in national print media. Works to promote policies that protect public health and the environment.

### **S.S. Papadopoulos & Associates, Inc.**

**Bethesda, Maryland**

#### **Environmental Engineer**

**October 1991 to May 1998**

Provided technical expertise to industry and regulators on issues related to water resources, contamination and clean up of environmental media, and human health risks from exposures to industrial chemicals and hazardous wastes.

### **Stanford University, Department of Civil Engineering**

**Palo Alto, California**

#### **Research Assistant**

**September 1990 to October 1991**

Developed software platform for streamlining investigations of contaminated sites, using optimization tools to maximize benefits and minimize costs associated with site investigation programs.

### **GeoSyntec Consultants**

**Atlanta, Georgia**

#### **Environmental Engineer**

**June 1988 to September 1990**

Conducted, designed and installed engineering projects that encompassed site investigations, engineering design, and hydrogeologic investigations and analyses at solid waste disposal facilities; served as Project Manager or Project Engineer for landfill design and expansion projects.

**Committee on Energy and Commerce**  
**U.S. House of Representatives**  
 Witness Disclosure Requirement - "Truth in Testimony"  
 Required by House Rule XI, Clause 2(g)

|   |                                      |                                     |
|---|--------------------------------------|-------------------------------------|
| Your Name: <u>Jane Hallihan</u>   |                                      |                                     |
| 1. Are you testifying on behalf of a Federal, State, or local Government entity?  | Yes                                  | <input checked="" type="radio"/> No |
| 2. Are you testifying on behalf of an entity that is not a Government entity?   | <input checked="" type="radio"/> Yes | No                                  |
| 3. Please list any Federal grants or contracts (including subgrants or subcontracts) that you personally have received on or after October 1, 2006:<br><br><p align="center">NONE</p>   |                                      |                                     |
| 4. Other than yourself, please list which entity or entities you are representing:<br><br><p align="center">ENVIRONMENTAL WORKING GROUP</p>   |                                      |                                     |
| 5. If your answer to the question in item 2 in this form is 'yes,' please list any offices or elected positions held or briefly describe your representational capacity with the entities disclosed in the question in item 4:  |                                      |                                     |
| 6. If your answer to the question in item 2 is 'yes,' do any of the entities disclosed in item 4 have parent organizations, subsidiaries, or partnerships that you are not representing in your testimony?  | Yes                                  | <input checked="" type="radio"/> No |
| 7. If the answer to the question in item 2 is 'yes,' please list any Federal grants or contracts (including subgrants or subcontracts) that were received by the entities listed under the question in item 4 on or after October 1, 2006, that exceed 10 percent of the revenue of the entities in the year received, including the source and amount of each grant or contract to be listed:<br><br><p align="center">N/A</p> |                                      |                                     |

Signature: Jane Hallihan Date: 7/6/09

## INSTRUCTIONS FOR COMPLETING THE TRUTH-IN-TESTIMONY DISCLOSURE FORM

1. ***In General.*** The form on the reverse side of the page is intended to assist witnesses appearing before the Committee on Energy and Commerce in complying with rule XI, clause 2(g)(4) of the Rules of the House of Representatives. The rule requires that:

In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a curriculum vitae and a disclosure of the amount and source (by agency and program) of any Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by an entity represented by the witness.

### Please complete the form in accordance with these directions.

2. ***Name.*** Please provide the name of the witness in the box at the top of the form.
3. ***Governmental Entity (Item 1 on the form).*** Please check the box indicating whether or not the witness is testifying on behalf of a government entity, such as a Federal department or agency, or a State or local department, agency, or jurisdiction. Trade or professional associations of public officials are not considered to be governmental organizations.
4. ***Nongovernmental Entity (Item 2).*** Please check the box indicating whether or not the witness is testifying on behalf of an entity that is not a governmental entity.
5. ***Grants and Contracts (Item 3).*** Please list any Federal grants or contracts (including subgrants or subcontracts) that the witness personally has received from the Federal Government on or after October 1, 2006.
6. ***Entity(ies) to be Represented (Item 4).*** Please list all entities on whose behalf the witness is testifying.
7. ***Representational Capacity (Item 5).*** If the answer to the question in item 2 is 'yes,' please characterize the capacity in which the witness is testifying on behalf of the entities listed in item 4.
8. ***Affiliated Entities (Item 6).*** Please indicate whether the entity on whose behalf the witness is testifying has parent organizations, subsidiaries, or partnerships that are not represented by the testimony of the witness.
9. ***Grants and Contracts (Item 7).*** Please disclose grants and contracts as directed in item 7.
10. ***Submission.*** Please sign and date the form in the appropriate place. Please submit this form with your written testimony. Please note that under the Committee's rules, 150 copies of a written statement of your proposed testimony must be submitted at least two working days before the commencement of the hearing. Please also provide a copy in electronic format, as described in the letter of invitation.