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ON BEHALF OF:
NATURAL RESOURCES DEFENSE COUNCIL

BEFORE THE U.S. SENATE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SUBCOMMITTEE ON TRANSPORTATION SAFETY, INFRASTRUCTURE SECURITY, AND WATER QUALITY

AT HEARING ENTITLED:
QUALITY AND ENVIRONMENTAL IMPACTS OF BOTTLED WATER

September 10, 2008

Good morning Senator Lautenberg, Senator Vitter, and members of the committee. Thank you for this opportunity to testify on the quality and environmental impacts of bottled water. I am Mae Wu, a staff attorney in the Health Program at the Natural Resources Defense Council (NRDC). I have a law degree from Duke University, a policy degree from the University of Cambridge, and a chemical engineering degree from Rice University. NRDC is a national, nonprofit organization of scientists, lawyers and environmental specialists dedicated to protecting public health and the environment.

NRDC's Health program focuses on toxic chemical pollutants in air, water, food, and shelter, including successful efforts to substantially reduce diesel air emissions from trucks and buses, for example, and to take a number of dangerous and outdated pesticides off the market. There are more than 70,000 chemicals in commerce, but some are much more toxic than others, and we can make great progress in environmental health protection if we focus on the chemicals pollutants that pose the greatest threat to human and ecological health.

NRDC's Health and Environment Program has worked for many years to strengthen health protections and right to know requirements for tap water and bottled water. On the tap water side, we have led the efforts to establish strong health-protective standards for both well-known contaminants, such as arsenic, perchlorate, cryptosporidium and pesticides, and "emerging contaminants" such as pharmaceuticals. We strongly support increased investment in our nation's water infrastructure, under both the Safe Drinking Water Act and Clean Water Act. Our nation's water system, although it faces many problems, is rightly the envy of many countries around the world.

At the same time, NRDC has also worked extensively on issues pertaining to bottled water, emphasizing that that the long-term solution to our drinking water problems is to improve tap water – not to switch to bottled water. This work includes publishing a 1999

report "Bottled Water: Pure Drink or Pure Hype?" which tested more than 103 brands of bottled water. Among other things, our report found that we cannot assume that all bottled water is more pure and safer than most tap water, because although most bottled water appeared to be of good quality, some contained contaminants exceeding regulatory standards. This finding may not be a significant issue for the average person, but it may be extremely serious for vulnerable subpopulations such as people with a weakened immune system, people with health problems, cancer patients, the very young, and the elderly. Our report also found that the federal regulation of bottled water could be improved in ways that would provide better assurance for the quality of bottled water including stronger health standards for some contaminants, requiring more frequent monitoring, better federal oversight, and mandating public disclosure of key information. These recommendations are just as important today.

The issues of whether bottled water is generally safer than tap water, whether consumers are provided sufficient information about the quality of their bottled water, and whether the federal and state resources being expended are sufficient to ensure the safety and quality of bottled water, are just as relevant nearly a decade later, especially so since bottled water consumption has doubled. In addition, over the past few years, awareness and concern has grown over the environmental and health implications of the enormous consumption of bottled water, including the contribution of solid waste to landfills from the bottles, the effect on water scarcity in some source areas, and the large amount of oil expended in the production and transport of bottled water across the country and around the world, including its contribution to greenhouse gas emissions.

We welcome an examination of these issues by this Subcommittee.

My testimony today will highlight some of the important discrepancies between the two separate regulatory systems that govern the nation's tap water and bottled water. I will also address some of the unique health risks posed by a plasticizer – known as DEHP – that can leach into the water from the bottles themselves, and the environmental issues arising with production and transport of bottled water. Much remains to be done to improve public protection and consumer awareness of the public health issues and environmental impact of bottled water consumption.

Use of Bottled Water Grows Every Year

As the members of this Committee are probably aware, bottled water consumption in this country continues to grow every year. The number of gallons of bottled water sold in the U.S. has more than quadrupled since 1990. The industry now brings in $15 billion and sells over 8 billion gallons of water annually to Americans. Ironically, despite one of the best and safest public drinking water systems in the entire world, the U.S. consumes the largest volume of bottled water in the world. Conservative estimates show that at least 15 percent of water used for drinking comes from bottled water,[1] and almost a decade ago, 9 percent of children received the majority of their drinking water from bottled water.[2] According to a 2003 Gallup Poll, three out of four Americans drink bottled water and one out of five drink *only* bottled water.[3] Survey after survey, and article after article

highlight one of the driving forces behind Americans' seemingly unquenchable thirst for bottled water as the belief that bottled water is safer than tap water.

Unfortunately, this belief is largely unfounded. No one should assume that water purchased in a bottle is necessarily any better regulated, any more pure, or any safer than most tap water. In fact, tap water is tested for safety more frequently than bottled water because our municipal water systems must meet strict requirements set by the U.S. Environmental Protection Agency (EPA) under the Safe Drinking Water Act (SDWA), whereas bottled water falls under less proscriptive regulations promulgated by the Food and Drug Administration (FDA) under the Food Drug and Cosmetic Act (FDCA). Moreover, while nearly all drinking water systems are covered by EPA standards, only an estimated 40 percent of bottled water products are regulated by the FDA.[4] And, as it turns out, in many cases – perhaps as much as 25 percent or more – bottled water is nothing more than tap water in a bottle – sometimes further treated, sometimes not.[5] This is not to say that bottled water is dangerous, although we are concerned that weaker oversight could let problems pass undetected. But there is no reason to assume it is any better for you either.

There are various reasons to use bottled water. In emergencies when tap water supplies are not available – either because of natural disasters such as hurricanes or contamination of tap water, people use bottled water as the only available source of drinking water. Also, aside from health concerns, some people choose to use bottled water because of taste and smell or for convenience. These latter concerns could be addressed at less expense and with less environmental harm by using home filters and convenient stainless steel reusable water bottles to carry tap water. Furthermore, given the environmental impacts of bottling water, as well as the significant expense to consumers, the vast majority of people in the United States who are drinking safe, clean water from their tap should reconsider their choice of voluminous consumption of bottled water.

Bottled Water is Not Necessarily Safer Than Tap Water

Consumers often have the mistaken impression that bottled water is always more pure, although little information is provided upon which they can base their decisions about drinking water. Studies conducted comparing the quality of bottled water to tap water underscore the fact that not all bottled water is as pure as the public may believe. In 1999, NRDC completed a four-year study of over 1,000 bottles of water. Of the bottles we tested, the majority proved to be good quality and relatively free of contaminants. The quality of some brands was spotty, however; 33 percent violated an enforceable state standard or exceeded microbiological-purity guidelines, or both, in at least one sample. Thus, a significant fraction of our bottled water samples from 1999 did pose a possible health risk, primarily for people with weakened immune systems (such as the frail elderly, some infants, transplant and cancer patients, or people with HIV/AIDS). Some of the contaminants that were detected – such as arsenic, nitrate, and trihalomethanes – have been associated with cancer or other illnesses in both laboratory and human population studies. Additional studies have confirmed NRDC's findings. For example, in 2000, a study comparing Cleveland tap water to various brands of bottled water found that some

were more pure, some were less pure and some were the same as tap. Those that were less pure were found to have higher levels of bacteria than the tap water.[6] Similarly, a simple comparison of Boston tap water to various bottled water brands found that bottled water quality is not necessarily better than tap water quality.[7]

People who assume that the FDA sets additional standards for contaminants in bottled water beyond what EPA sets for tap water are mistaken: if EPA has not set a standard for a contaminant in tap water, FDA has not set one for bottled water. In at least two instances (discussed below) – *E. coli* and DEHP – FDA has done less than EPA. In addition, weaker oversight and limited resources at the federal agency leave the bottled water system vulnerable to potentially undetected contamination.

Federal Regulation Of Tap Water Is More Stringent Than Its Regulation Of Bottled Water

Tap water in the U.S. is regulated by the EPA under the SDWA. Pursuant to the SDWA, EPA has established over 80 health-based standards for contaminants which may be present in drinking water and mandates that levels of those contaminants cannot exceed those standards (called Maximum Contaminant Levels or MCLs). Furthermore, EPA has a list of 25 unregulated contaminants for which many public water systems are required to monitor, which may be considered for future regulation.

By contrast, Congress has delegated limited authority to the FDA under the FDCA to regulate bottled water. The FDCA regulates bottled water as a food and prohibits the introduction of "adulterated" bottled water into interstate commerce, meaning bottled water that is "injurious" to health. The FDCA requires the FDA Secretary to establish "standard of quality" regulations based on the contaminants regulated by EPA that are no less stringent than the EPA tap water standards (or explain why it chose not to adopt those standards). FDA's failure to adopt health standards set by EPA within the statutory deadline led Congress to amend the FDCA as part of the SDWA Amendments of 1996 so that any new MCLs adopted by EPA would automatically become the FDA standards of quality if the deadlines were not met; however, some of the standards set by EPA prior to 1996 have still not been adopted by FDA. Two of the most significant for public health are *E. coli* and DEHP.

Escherichia coli refers to a category of bacteria with many strains – many of which are harmless, but some of which can be very dangerous or deadly. Depending on the strain, the health effects from exposure to *E. coli* can range from diarrhea, urinary tract infections, respiratory illness, pneumonia, and even death.[8] In light of these potential effects, EPA mandates that municipal tap water cannot have any confirmed *E. coli* bacteria. The International Bottled Water Association (IBWA) – the trade association representing bottled water manufacturers – has established a model code that also prohibits the presence of *E. coli* in its members' water.[9] However, while FDA does regulate coliforms (a broader category of bacteria, which includes *E. coli*) in bottled water, the agency has set no corresponding prohibition on *E. coli* as EPA and IBWA have. Fortunately, the NRDC report found no *E. coli* in its tests. But an outright

prohibition by FDA would better ensure that all bottled water (not just the ones we sampled) are likely free of *E. coli*. An October 1993 proposal by FDA to consider a prohibition on *E. coli* in bottled water languished at the agency until November, 2004 when it was withdrawn altogether from further consideration.[10]

One of NRDC's most serious concerns with FDA's current standards for bottled water is the agency's failure to set a standard for the presence of a particular, toxic plasticizer that is used as a gasket for the plastic caps. DEHP (di(2-ehtylhexyl) phthalate) is one of the most toxic phthalates – it is a potent endocrine disruptor which interferes with the production of the male hormone, testosterone. In animal studies, DEHP has been associated with a wide range of health outcomes including birth defects of the genitals, testicular cancer, poor sperm quality and abnormal hormone profiles.[11] Humans, especially baby boys, who have been exposed to DEHP have similarly been found to have alterations in the development of their genitals.[12] Likewise, adult men with poor sperm quality have been found to have higher levels of DEHP in their bodies.[13] The State of California has recognized the toxicity of DEHP and has listed it on their Proposition 65 list of chemicals known to cause cancer and cause developmental or reproductive harm. Because bottled water may also be used to reconstitute powdered formula, this FDA inaction raises special concerns about exposures in infants.

The Centers for Disease Control has found the majority of Americans carry residues of DEHP in their bodies.[14] DEHP has also been found in cord blood,[15] amniotic fluid[16] and breast milk.[17] Exposures are especially of concern for children whose reproductive organs are still developing and vulnerable to hormonal disruption from chemicals like phthalates. The National Toxicology Program has expressed concern for the reproductive toxicity of DEHP in young children.[18]

In fact, in 2002 FDA, based only on evidence of reproductive harm in animal studies, issued a public health notification advising healthcare providers about reducing exposure to DEHP from medical devices.[19] The notification stated

> Exposure to DEHP has produced a range of adverse effects in laboratory animals, but of greatest concern are effects on the development of the male reproductive system and production of normal sperm in young animals. We have not received reports of these adverse events in humans, but there have been no studies to rule them out. However, in view of the available animal data, precautions should be taken to limit the exposure of the developing male to DEHP.[20]

In light of the human studies that have been published since that notification was released, this precaution has become even more pertinent.

Even without these recent studies to support its decision, but recognizing that DEHP occurs in drinking water and that there are health effects associated with it, in 1992 EPA established a MCL under the SDWA for DEHP in tap water, prohibiting any tap water to have more than 6 parts per billion (ppb) of DEHP.

However, despite all of the concerns with DEHP (including its own), FDA has not set a standard to limit the amount of DEHP that is in bottled water. In 1996, FDA *considered* setting a standard for DEHP in bottled water at the same level as EPA's standard for drinking water.[21] During that proposal period, some bottlers and members of the plastics manufacturing industry vigorously opposed a phthalate standard, arguing that it would cause some bottled water to be in violation after storage for long periods.[22] As one company put it, "bottled water tested immediately after packaging would meet the 6 ppb [FDA proposed] limit but with storage it is possible that levels might exceed this requirement . . .[so] the proposed amendment . . .[would] effectively ban the use of DEHP in closure sealants for bottled water . . . ."[23]

In fact, in a different set of regulations promulgated over 20 years ago, FDA explicitly *permitted* the use of DEHP in food-packaging material when it migrates into food with high water content.[24] Specifically, DEHP is allowed in the gaskets that seal the plastic caps on bottles. FDA itself has noted that this use of DEHP "may result in levels of [DEHP] migrating into water that exceed" the EPA standard.[25] Facing the potential conflict between its existing regulations and EPA's health standard, FDA deferred final judgment on whether to issue a standard for DEHP in bottled water, and has yet to act – for the past 12 years.

In light of the extensive scientific evidence that has emerged about the potential health risks posed by DEHP since it last considered this issue in 1996, the FDA should move expeditiously to adopt the EPA tap water standard for bottled water.

Testing and Reporting

FDA's failure to set a standard equivalent to EPA's MCL for DEHP is only one way in which the regulation of bottled water is less thorough than for tap water. The FDA's requirements for testing what is in bottled water (usually referred to as monitoring) and reporting those results to government agencies and the public are also weaker than those for tap water.

For example, the frequency at which bottling companies must monitor their product is less than what public water systems must do. EPA regulations require small public water utilities to monitor for bacteria at least 20 times a month and large utilities to monitor hundreds of times a month. In contrast, FDA requires that bottled water manufacturers test for bacteria only once a week. Similarly, EPA requires public water systems to test for synthetic organic chemicals (like vinyl chloride) four times a year, while FDA only requires bottled water manufacturers to test for them one time a year.[26]

Furthermore, municipal tap water must be tested by a government-certified lab, while no certification is required for those testing bottled water. FDA relies on bottled water companies to self-test for contaminants, rather than ensure that independent laboratories use approved water quality test methods as EPA does.

Another important difference in testing and reporting concerns public disclosure; FDA does not require that bottled water testing results be submitted to the government or made available to the public. EPA on the other hand requires that municipal water providers publicly report their monitoring results and any violations to EPA or the state (if the state has EPA-approved enforcement authority). Serious violations must be reported within 48 hours. EPA posts all violations on the Web for easy public access. EPA also requires public water systems to keep bacteria testing results for 5 years and chemical tests for 10 years, to allow effective EPA and state inspections.

In contrast, FDA does not require bottlers to notify anyone of test results. Furthermore, FDA requires that test results be retained for only two years. Since FDA inspections occur, at best, every four to five years, many contamination problems may never come to FDA's attention.

FDA does have the ability to initiate court actions to prevent the sale of bottled water that is injurious to health, but the Agency largely relies on voluntary recalls by manufacturers to protect the public from contaminated bottled water. FDA provides unenforceable guidance to help manufacturers establish recall procedures, but has no immediate authority to mandate recalls.[27]

In 1991, the GAO recognized these problems as major areas where FDA could work to adequately ensure the safety of bottled water.[28] The largest problems identified – self-testing by bottlers, lack of reporting requirements, and failure to require laboratories to be certified – meant that FDA could not ensure that tests were actually conducted or that the results are accurate. Now, 17 years after the GAO's report, FDA still has not improved its regulation of bottled water in these areas.

Furthermore, FDA continues to assign a low priority to bottled water. In 1999, NRDC learned that FDA had dedicated just one half of one staff person to bottled water regulation and less than one to ensuring bottled water compliance. Since then, very little has changed at FDA – with estimates around the same amount of staff dedicated to bottle water regulation at the agency.[29] The lack of resources dedicated to overseeing the bottled water industry suggests that even if problems exist, it is less likely that such problems would be identified. In stark contrast to FDA, EPA headquarters in Washington, D.C. alone has over 150 FTEs working on drinking water.[30]

FDA claims that because the public health threat of bottled water contamination is low, there is reason not to devote scarce agency resources to overseeing the industry. While the agency is undoubtedly stretched thin, its failure to conduct adequate oversight prevents the agency from identifying real problems that may exist. In addition, such a significant lack of resources may contribute to not addressing even the most immediate and significant needs for ensuring the safety of bottled water, such as by establishing a standard for DEHP.

Many types of bottled water are not regulated by FDA

FDA regulations have other troubling limitations that pose problems for large scale consumption of bottled water. Specifically, the definition of bottled water excludes large categories of products generally considered by consumers to be bottled water, such as sparkling water, tonic water, soda water, carbonated water, seltzer water, and others.[31]

Also, FDA has interpreted its statutory mandate of regulating only water shipped in "interstate commerce" to exclude a great amount of the bottled water sold in the United States. FDA's position thereby excludes a significant amount of bottled water sold in the U.S. that is bottled and sold within the same state, constituting *intra*state commerce as opposed to *inter*state commerce.[32]

As a result, regulation of a large amount of bottled water is left to state public health authorities, who also are under serious resource constraints. In addition, states are under no legal obligation to adopt the FDA bottled water standards, and FDA has no formal system to track the adequacy of state regulations, inspection results, enforcement, source-water approvals, or other aspects of state bottled water programs. To the contrary, in 1991, the GAO identified the inadequate regulation of intrastate bottled water as a significant problem in its 1991 report to Congress.[33] NRDC's 1999 survey of state regulations found that 13 states had no resources, staff or budgetary allotments specifically earmarked to implement the state bottled water programs. In addition, 26 states reported having less than one full time staff equivalent dedicated to running the state's bottled water program. Some states have weaker regulations than FDA, and in fact, three states (Kansas, Delaware and Indiana) and the District of Columbia have no regulations for intrastate bottled water. These gaps leave the public unprotected from potential problems in bottled water from these areas.

Voluntary standards

IBWA has established a model code for its members.[34] While this voluntary industry effort contains some valuable elements including strong protections for contaminants (including *E. coli*) and some good source water protection and monitoring guidelines, they are not an effective substitute for a strong and enforceable federal regulatory program. In addition, voluntary standards only apply to IBWA members – and almost 20 percent of the industry – including giants Coca-Cola and Pepsi, manufacturers of Dasani and Aquafina respectively – are not members.[35] Furthermore, these voluntary standards are only applicable to those covered under the narrow definition of bottled water established by FDA. While some states (more than a dozen, according to IBWA) have adopted their standards as binding and enforceable, most states have not done so.

Right to Know

Perhaps the greatest difference between the regulation of bottled water and tap water is the public does not have access to the same information about bottled water that it does about tap water. EPA requires that municipal water utilities produce annual right to know reports – termed "Consumer Confidence Reports" under the Safe Drinking Water Act – to inform the public about their tap water including what types of contaminants

have been found, and at what levels, in the past year. The reports are also intended to help their customers understand the potential health effects associated with the presence of any regulated contaminant found in the tap water. These reports must contain, among other things, information on the source of the water, information about the detection of any regulated contaminant in violation of a maximum contaminant level, and the health concerns associated with that exceedance, and information on the levels of unregulated contaminants for which monitoring is required.[36] FDA requires no such reporting or labeling for bottled water.

Given the gaps in the federal regulation of bottled water, and the fact that most people who drink bottled water do so under the mistaken belief that it is more pure and safer than tap water – consumers must have access to information about the actual quality of the water they are drinking. Because consumers should not assume that bottled water is safer than tap water, they should be given the information they need to make smart decisions about the water they choose to drink.

For that reason, NRDC petitioned FDA in 1999 to, among other things, require labels on bottled water that list the following: any contaminants of potential concern found in the water and any health goals or advisories for them, the potential health effects of contaminants found, any violations by the bottler of state of federal rules in the past year, the precise source of the water, any treatment used, whether the water meets the CDC/EPA criteria for *Cryptosporidium* safety, the bottling date, and the FDA website and addresses or phone numbers for further information.[37] To date, the Agency still has not established consumer right-to-know standards or set standards for DEHP, thus falling short in two critical areas for public health protection in this industry.

FDA's failure to act is a clarion call for congressional action to ensure the public has full information about bottled water, equivalent to what it is provided for tap water. As such, we believe that legislation along the lines of the right to know bill introduced by Senator Lautenberg in 1999 (S.790) to require bottled water manufacturers to provide annual reports and to label their bottles is needed. Such legislation would be an important step towards ensuring that consumers can make fully informed choices about the water that they drink.

Environmental Impacts of Bottled Water

Even if there were no direct health concerns posed by the consumption of bottled water, there are significant environmental issues posed by the production and distribution of bottled water that point to a wasteful use of our limited, precious resources.

Start with 60 *billion* plastic bottles a year – almost a billion bottles a week, or almost 160 bottles per year for every man, woman and child in America. Almost 90 percent of water bottles are not recycled and the plastic will likely never decompose.[38] Food & Water Watch has estimated that PET plastic water bottles create two million tons of trash in U.S. landfills each year.[39] Overall, plastics created 30 million tons of municipal solid waste, representing 11.7% of the total in 2006.[40] That means that every year 45 billion

plastic bottles (which is the equivalent of $1 billion worth of plastic) are sent to landfills that are already over burdened.

Next, consider that in contrast to tap water, bottled water gets to us on *ships and trains and trucks* that all use oil and comes in *bottles made from oil*. The Earth Policy Institute estimated in 2006 that the manufacture of water bottles for U.S. consumption required more than 10 million barrels of oil annually.[41] And those bottles are increasingly coming from the farthest corners of the earth. Not just France, but Fiji, in the middle of the South Pacific.

In 2005, the Swiss Gas and Water Association commissioned a study to compare the environmental impacts of tap water against those from bottled mineral water. The study found that bottled mineral water is responsible for more than 175 times more primary energy consumption, almost 170 times more crude oil use, and over 200 times more greenhouse gas emissions.[42] These findings were based on an entire life cycle assessment of the bottled water and tap water – from extraction to serving the water in a glass. The assessment calculated the environmental impacts from water extraction and treatment, bottling (including packaging, distribution, and transportation), and distribution via water pipes). The report considered various metrics to analyze the different variations of water including cumulative primary energy consumption, crude oil equivalent, and greenhouse gas emissions. For every metric, tap water consistently rated lower environmental impacts than bottled mineral water. Relatively speaking, non-refrigerated, non-carbonated bottled water contributes a very large environmental footprint compared to non-refrigerated, non-carbonated tap water.

The results of this study support what is probably common sense for most people who consider the issue: a significant amount of resources is used, and pollution and waste is created, in the production and distribution of bottled water, which could be avoided by a greater use of tap water. Given that tap water in the United States is, by and large, safe; that there is little basis to assume that bottled water is generally safer than tap water; and that the cost of bottled water is vastly greater than that of tap water, consumers should seriously consider whether extensive consumption of bottled water is the best choice.

There is also growing concern that bottling water can produce scarcity problems in certain areas. Water scarcity issues are becoming more common in the U.S. and the extraction of water from some areas for bottled water could exacerbate some of these problems. Anecdotes about the effects of extracting water for bottling on small communities abound – from Mecosta County, Michigan to McCloud, California to Barrington, New Hampshire.[43] In addition to these extraction issues, estimates indicate that for every one liter bottle of water, it takes 9 liters of water just to make that bottle, from extraction of the oil to refining to production of the plastic.

Recommendations for Bottled Water

Given the disparity in regulation of tap water and bottled water, and the lack of sufficient information available to the public regarding the contents of bottled water, NRDC offers the following recommendations:

Congress should enact bottled water labeling legislation that ensures the public's right to know about the quality, treatment, and source of bottled water.

FDA should harmonize its regulations with EPA's – particularly including the adoption of EPA's health standard for DEHP, prohibition on the presence of *E. coli*, and increased monitoring and reporting requirements. To the extent that FDA does not have or does not believe it has the authority to undertake these actions, Congress should clarify that it does.

All bottled water sold in the United States should be federally regulated, whether it is carbonated or not. Congress should introduce legislation to make this clear if FDA believes it lack the authority, to ensure that all bottled water sold in the United States is federally regulated.

In addition, Congress may also want to consider whether, given their lack of resources devoted to the issue, jurisdiction over bottled water regulation should be transferred from FDA to EPA.

Recommendations for Tap Water

Congress needs to continue to maintain and improve protection for the nations' drinking water, including increasing funding for water infrastructure under both the Safe Drinking Water and Clean Water Acts; and establishing strong health-protective standards for prevalent and dangerous contaminants including perchlorate and TCE.

Conclusion

The long term solution to drinking water problems is to fix tap water – not to switch to bottled water. There are many holes in the regulation of bottled water, and the public should not assume that water purchased in a bottle is necessarily any better regulated, any more pure, or any safer than most tap water. Some bottled water is not of the highest quality. It is likely that some bottled water is being consumed without having been subjected to proper and adequate quality testing, potentially putting consumers' health at risk. Most of the time, plain old tap water is just as good for you as bottled. It will cost a lot less and it does not consume as much energy or leave as much waste.

Thank you again for inviting me to testify before you today. I would be happy to answer any questions from the panel.

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[24] 21 C.F.R. 181.27.
[25] 61 Fed. Reg. 13258 (March 26, 1996).
[26] Citation

[27] U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, Industry Affairs Staff Brochure, " FDA Recall Policies" June 2002, available at < http://vm.cfsan.fda.gov/~lrd/recall2.html> last visited 7 September 2008.
[28] U.S. Governmental Accountability Office, "FDA Could Do More To Ensure the Safety of Bottled Water." Testimony before the House Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, April 10, 1991, available at <http://archive.gao.gov/d38t12/143588.pdf>, last visited 5 September 2008.
[29] Personal communication between Henry Kim, FDA and Dylan Atchley, NRDC. 4 September 2008.
[30] Personal communication with EPA staff, U.S. EPA on 5 September 2008.
[31] 21 C.F.R. 165.110(a)(1).
[32] However, the bottled water industry, by and large, has a significant effect on interstate commerce and many of the products used in the bottling plants – such as the bottles, the labels, the caps – move through interstate commerce even if the source of the water may be intrastate. Given the prevalence of moving plastic bottles through interstate commerce, most, if not all, bottled water should fall under FDA's watch.
[33] U.S. Governmental Accountability Office, "FDA Could Do More To Ensure the Safety of Bottled Water." Testimony before the House Committee on Energy and Commerce, Subcomittee on Oversight and Investigations, April 10, 1991, available at <http://archive.gao.gov/d38t12/143588.pdf>, last visited 5 September 2008.
[34] International Bottled Water Association Bottled Water Report, 2008 Media Kit, <http://www.bottledwater.org/public/downloads/2008ibwamediakit.pdf>, last visited 4 September 2008.
[35] <http://www.bottledwater.org/public/whatis_main.htm> last visited 3 September 2008.
[36] 42 U.S.C. §300g-3(c)(4).
[37] Cite to petition; the studies showing that more chemicals can leach into bottled water over time and after exposure to elevated temperatures underscore the importance of labeling water with bottling dates, as well as information about the proper storage.
[38] Container Recycling Institute, available at <http://www.container-recycling.org/images/plastic/graphs/PETrecsale-units-96-06.gif>, last visited 8 September 2008.
[39] *Take Back the Tap: Why Choosing Tap Water Over Bottled Water is Better for Your Health, Your Pocketbook, and the Environment,* Food & Water Watch, June 2007 (p. 7) http://www.foodandwaterwatch.org/water/pubs/reports/take-back-the-tap
[40] United States Environmental Protection Agency, Municipal Solid Waste (MSW), Plastics, January 29, 2008, available at <http://www.epa.gov/garbage/plastic.htm>, last visited 8 September 2008.
[41] Earth Policy Institute, Bottled Water: Pouring Resources Down the Drain (2006), *available at <www.earth-policy.org/Updates/2006/Update51.htm>* last visited 8 September 2008.
[42] Jungbluth, N. "Comparison of the Environmental Impact of Drinking Water vs. Bottled Mineral Water." Prepared for the Swiss Gas and Water Association. 2005. available at <www.fcrn.org.uk/researchLib/PDFs/bottled%20water%20lca.pdf> last visited 3 September 2008.
[43] See generally "Assessing The Environmental Risks of the Water Bottling Industry's Extraction of Groundwater," Hearing in the Committee on Government Oversight and Reform, Domestic Policy Subcomittee.