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WHAT'S IN YOUR DRINKING WATER? You'll Find Out in Consumer Confidence Reports (CCRs)

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Before the end of this year, water utilities will be sending information directly to you or your local mass media outlets, to let you know what they are measuring in your drinking water supply. This article will help prepare you for some of the things you may see. Do not be alarmed to see all sorts of chemicals in your drinking water. Some of them are purposely added to make the water safer to drink. And others are not a real health threat as long as they are kept below certain levels.

No Such Thing as Pure Water in Nature

Water supports all kinds of microbial life and has the ability to dissolve and absorb some of almost everything it touches. Therefore, it is not uncommon for water to contain hundreds, or even thousands of different contaminants. Some of these contaminants come from natural sources and others from synthetic, human-produced sources.

Humans Cause Pollution

Contaminants that come from human sources or get in water because of human activities are called pollutants. The most common sources of pollutants include sediment from land-disturbing activities, products from human and domestic animal wastes, and a multitude of inorganic and both natural and synthetic organic chemicals which are widely dispersed throughout our environment.

We have purposely used water for thousands of years as a dump for human and other waste products. For a period of time, most of these wastes were seemingly carried away to never be seen or heard from again. Only 130 years ago, did we realize that one of the most common methods of transmitting human disease was through our drinking water supplies. And we couldn't even see the disease causing organisms by unaided eye. As our numbers grew, so did our waste products and by-products, and other problems became more apparent. That is why we now have environmental statutes that limit waste and wastewater additions to our water supplies.

Contaminants and Pollutants Come from Everywhere

With further observation, we have now learned that many things other than direct discharge of pollutants can degrade water quality. Water comes in contact with just about everything as it moves through its natural cycle. The longer water is in contact with potential contaminants, the greater the likelihood it will contain more contaminants (number and level). However, processes that affect the die-off of organisms and their removal as well as removal of other contaminants by natural filtration, also influence water purity.

Nuisance and Health-Related Problems

When contaminants or pollutants reach certain levels in drinking water, they may cause either nuisance or health-related problems for humans. Typical nuisance problems include color, taste, odor or staining. Health problems are defined as either acute (short-term response) or chronic (long-term response). In drinking water, acute problems are usually associated with microbial contaminants, while chronic problems are generally associated with chemicals. We have taken certain steps, which includes the implementation of federal drinking water regulations, to reduce the likelihood of nuisance or health problems in public drinking water supplies in the United States.

Our water systems select water sources believed to be less contaminated or less susceptible to contamination for drinking water supplies, but no water supply is completely safe from contamination or pollution. Our increasing numbers and our associated waste products, our food production and recreational activities, and other by-products of our industrialized society, have all resulted in increased pollution of our water supplies. Thus, we have further increased the monitoring and treatment of drinking water supplies to ensure their safety for human consumption.

Monitoring and Treatment

Increased monitoring and treatment are necessary to maintain good drinking water quality, but it is very expensive, and in many cases, virtually impossible to reduce all contaminants to non-detectable levels in many of our drinking water sources. Therefore, we treat drinking water to eliminate nuisance problems and lower contaminants which cause health problems to levels considered very safe or below a certain risk value for lifetime consumption. Allowable levels for all these contaminating

agents in drinking water are called our national drinking water standards.

All utilities which supply public drinking water must comply with national drinking water standards. These standards are enforced by the U.S. Environmental Protection Agency under the federal Safe Drinking Water Act (SDWA), passed by Congress in 1974 and last amended in 1996. In most states, the state environmental agency such as Alabama Department of Environmental Management (ADEM), carries out the provisions of the SDWA. The EPA provides oversight review. All water utilities that supply public drinking water in Alabama are under the purview of ADEM's Water Supply Branch in their Water Division. ADEM sets regulations and monitoring requirements which can be more strict, but must meet the minimum requirements of the federal Safe Drinking Water Act.

How Safe is Our Drinking Water?

More Americans and more Alabama citizens are now drinking better quality water than ever before, and the 1996 amendments to the Safe Drinking Water Act are designed to further improve drinking water quality and improve public confidence in our drinking water supplies.

If you have ever wondered what type of contaminants might be in your drinking water supply, you will soon find out. You will be receiving a report that tells you exactly what is in your water, because all drinking water utilities have been mandated by federal law to provide that information to you at least once per year beginning in 1999. Between April and October 19 of 1999, some 55,000 water systems, serving over 240 million Americans or approximately 85 percent of the Nation's citizens, must provide "consumer confidence" reports to their customers.

These consumer confidence reports will contain information on the various levels of contaminants in a water supply, whether the water meets federal health standards, and if not, why not. The general feeling of EPA is that this mandate should give utilities additional incentive to deliver the cleanest water possible.

Public Response to Consumer Confidence Reports (CCRs)

Some utility managers are worried about how the public will respond to consumer confidence reports, especially if all measurable contaminant levels are indicated in the reports. Their feeling is that such information, at least initially, could instill fear instead of confidence in public drinking water supplies. Such a response could cause a backlash for water utilities, their managers and others who are supposed to be in charge of providing good quality drinking water.

Consider for example, that a list of long-name, synthetic organic chemicals show up at measurable levels far below health standards in a drinking water supply. The primary concern of consumers may be why these chemicals are in their water at any measurable concentration. Most people do not relate to the dose-response-relationship between living organisms and chemicals. Therefore, the fact that the concentrations of these chemicals are far below drinking water standards may matter little to them, as far as their perception of whether there is a problem or not.

It is very likely that consumers will demand more information as to where these chemicals originated and why their water utility allows any trace of these chemicals to remain in their drinking water supply. What consumers need to know is that water utilities do not have control of the activities that cause contamination in the first place, and that many of the low levels of contaminants can be removed or further

reduced if consumers all willing to pay higher water rates for no increase in health protection.

What the Consumer Confidence Reports Must Provide

While water systems are free to enhance their reports in any useful way, each report must provide consumers with the following fundamental information about their drinking water:

- * 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 that states are completing over the next five years;
- * 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 any 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-related rules;
- * an educational statement for vulnerable populations about avoiding Cryptosporidium;
- * educational information on nitrate, arsenic, or lead in areas where these contaminants are detected above 50% of EPA's standard; and

* phone numbers of additional sources of information, including the system and EPA's Safe Drinking Water Hotline (800-426-4791).

This information will supplement public notification that water systems must already provide to their customers upon discovering any violation of a contaminant standard. This annual report should not be the primary notification of potential health risks posed by drinking water, but will provide customers with a snapshot of their drinking water supply.

Summary

The mandate requiring consumer confidence reports is considered the centerpiece of the citizen's right-to-know provisions of the 1996 amendments of the Safe Drinking Water Act. But, both immediate and long-term impacts are uncertain, and depend somewhat on how consumers react to the fact that their drinking water contains many contaminants. Whether public fear of chemicals is reduced or not, the long-term impact should be safer drinking water supplies. However, it will probably take a while for consumers to adjust to the fact that their drinking water contains all sorts of chemicals.

For additional information on CCRs see the previous timely information article titled "*What are Consumer Confidence Reports?*"? You may also look on the Internet at: < <http://www.awwa.org/ccrmain.htm> > .