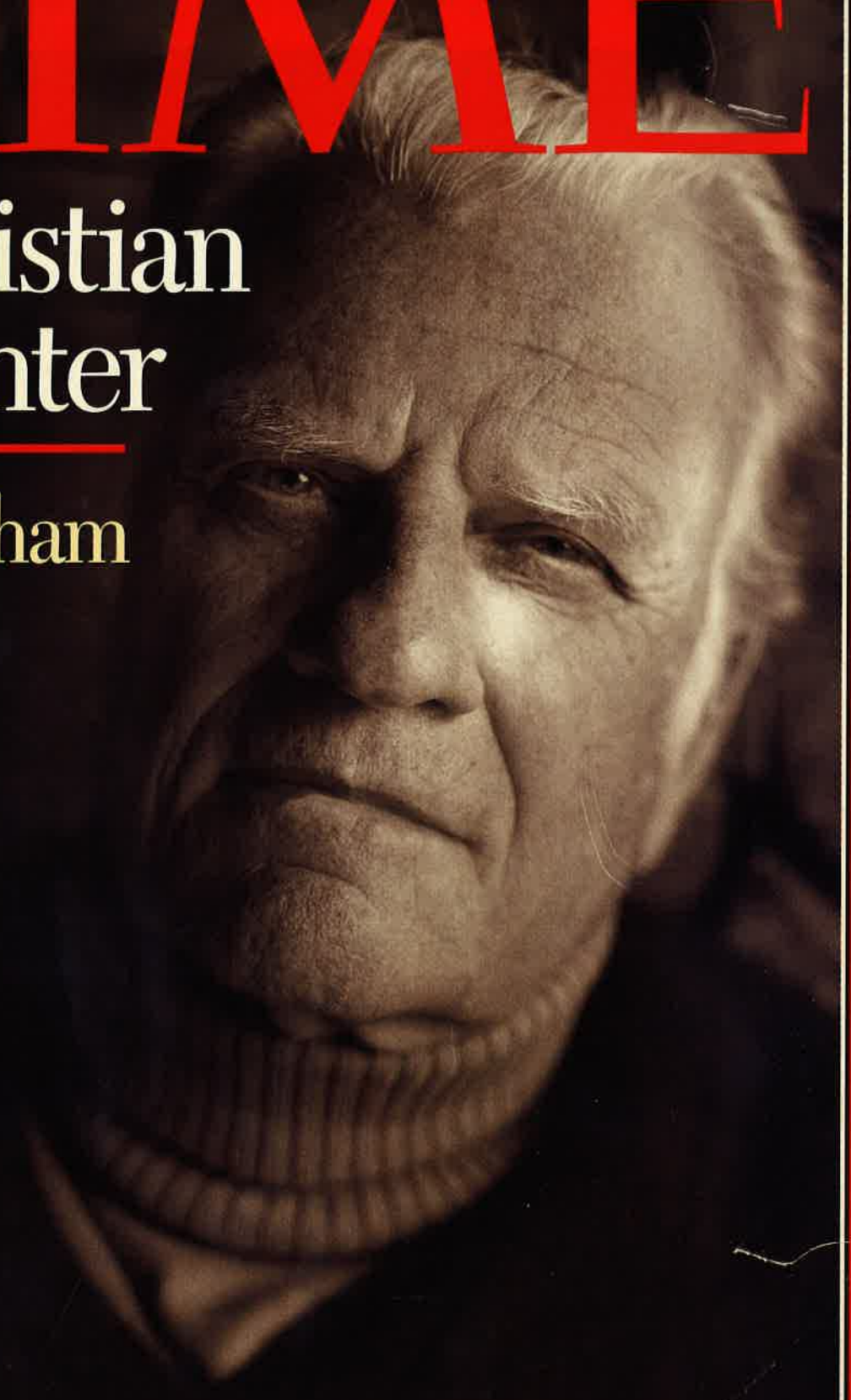


TIME

A Christian In Winter

Billy Graham
At 75



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■ ENVIRONMENT

TOXINS ON TAP



DENNIS CHALKIN FOR TIME

The water Americans drink may look clear and clean, but it often contains noxious chemicals and malicious microbes

By MICHAEL D. LEMONICK

“DON’T DRINK THE WATER,” goes the old admonition to tourists visiting underdeveloped countries. But most Americans don’t look with suspicion at their own kitchen faucet.

Maybe they should. Overall, the U.S. still has one of the cleanest water supplies in the world, but that doesn’t mean it’s safe in all places at all times. This year’s headlines have destroyed any illusions about the purity of water coming from spigots in town and country.

In April enough of a microorganism got through treatment plants in Milwaukee, Wisconsin, to turn the city’s drinking water into a bilious brew, sickening nearly half the population and killing one person—and a few weeks ago, the same bug turned up again during a routine test. In July residents in the Chelsea section of New York City had to boil their water to kill potentially dangerous bacteria. Just three weeks ago, health officials tacked warnings on 71 houses in Gastonia, North Carolina, advising people that an industrial chemical had been detected in their wells at levels many times higher than what the U.S. Environmental Protection Agency allows.

Hardly a week goes by, in fact, without reports about contaminated water somewhere in the nation, and the incidents that make news are only a tiny part of the problem. According to a new study by the Natural Resources Defense Council, there were some 250,000 violations of the federal Safe Drinking Water Act in 1991 and 1992 alone, affecting more than 120 million people. Americans are ingesting such noxious pollutants as bacteria, viruses, lead, gasoline, radioactive gases and carcinogenic industrial compounds. “Like so many other problems that we have swept under the rug during the past decade and more,” says David Ozonoff of Boston University’s School of Public Health, “the national task of assuring that our drinking water is safe to drink can no longer be postponed.”

Fortunately, it doesn’t have to be. The Senate has begun hearings that will ultimately lead to the reauthorization, and possible strengthening, of the 1974 Safe Drinking Water Act. But the debate will be long and difficult. Environmental groups such as the N.R.D.C. want stricter enforcement of the existing rules, along with new or tougher standards on contaminants like

The 10 Worst States

Percentage of the population served by water systems cited in 1992 for violating the Safe Drinking Water Act

| | |
|----------------|-----|
| Arizona | 26% |
| New Jersey | 22 |
| Idaho | 21 |
| New Hampshire | 20 |
| Vermont | 18 |
| Oklahoma | 17 |
| Washington | 15 |
| Louisiana | 14 |
| Illinois | 13 |
| South Carolina | 12 |

Source: Environmental Protection Agency

radioactive radon gas and arsenic. Lined up on the other side are state and local governments and water utilities, which insist they don't have enough money to comply with the law as it is, let alone additional rules. The regulations should be relaxed, they say, not strengthened.

It's true that the N.R.D.C. report is far from perfect. Many of the violations it cites involve nothing more than late filing of field reports, and its complaint that only 1% of violations result in "final formal enforcement actions" is misleading. Says James Cleland of the Michigan public service department: "In our state, we address 99% of the violations, but we don't address them all with formal enforcement. Sometimes all it takes is a telephone call."

Yet it isn't just the environmentalists who see a problem. A survey by the federal Centers for Disease Control shows that in 1989 and 1990, 4,288 people in 16 states got sick, and four died, from bacteria and viruses in their water. And last spring the nonpartisan General Accounting Office found, among other things, that many wa-



Laid low by a nasty microorganism last spring, Milwaukee promptly spent \$1 million to upgrade treatment plants like this one, which filters water through sand

ter systems do not test for all the pollutants the EPA considers dangerous, and don't evaluate distribution systems, operators or inspectors. Based on these and other studies, the N.R.D.C. has identified several especially worrisome hazards:

PATHOGENS: These include bacteria, viruses and protozoa such as the *cryptosporidium* that struck Milwaukee. These sicken 900,000 people a year, says the N.R.D.C. report, and kill perhaps 900, usually those with weak immune systems (the very young and very old, AIDS sufferers and organ-transplant patients).

TRIHALOMETHANES: Ironically, these compounds are by-products of the chlorine used to kill waterborne pathogens. The N.R.D.C. estimates that these chemicals may cause more than 10,000 bladder and rectal cancers a year.

ARSENIC: The dangers of low-level exposure are still being debated, but some 350,000 people may be taking in more than the EPA allows.

LEAD: The risks have been known for years, but plenty of lead still gets into drinking water, since testing for the heavy metal is not universal. About 560,000 children have unacceptably high levels of lead in their blood, which could lead to neurological problems. The EPA also calculates that 680,000 cases of high blood pressure in adult men could be prevented by reducing lead in drinking water.

RADIOACTIVE CONTAMINATION: There are no rules about how much is safe, but the N.R.D.C. cites EPA figures showing that about 50 million Americans drink radon-tainted water. The tasteless, odorless gas, which seeps into



Filters can help ensure purity, but if not cleaned regularly, they may be a fix worse than the problem

How to Protect Yourself

IS YOUR WATER SAFE? THE COMPANY OR MUNICIPAL AUTHORITY that supplies it is required by federal law to give you an analysis and disclose any violation of health standards. But even if you can trust the company, the report won't tell you what happens to the water in the dank recesses of your own plumbing system. The only way to know precisely what's coming out of your tap is to have your water tested. The EPA's Safe Drinking-Water Hotline (800-426-4791) offers names of testing laboratories in individual states. The hot line can also answer technical and health questions such as "How much *cryptosporidium* is too much?"

Special mail-order labs can help as well. They send you emp-

ty bottles and instructions; you ship back samples and receive a detailed analysis. Two particularly reliable labs are Suburban Water Testing Laboratories (800-433-6595) and National Testing Laboratories (800-458-3330). Prices range from \$25 for a simple test for lead to \$178 for the works, including screening for bacteria, nitrate, lead and PCB levels.

What if the lab raises the red flag? Let's take lead as an example, since it's one of the most common problems. Too much lead (more than 15 parts per billion) tends to show up in older, turn-of-the-century houses with lead pipes and in homes where lead

water naturally from underground rocks in many areas, is a proven cause of both lung and rectal cancer.

All the reports and studies agree that the problem is not so much with large water systems like Milwaukee's and New York City's, which have the resources and expertise to prevent contamination or, at worst, deal with it when it occurs. Even when the government has to pressure a system to force compliance with water standards—as with the \$900,000 fine levied under the Safe Water Act against Butte Water Company in Montana for bacterial contamination—enforcement usually focuses on systems that serve thousands of people.

The real danger lies with the 83% of systems that have fewer than 3,000 customers each but serve a total of 20 million Americans. These systems can't charge enough to pay for the necessary tests, and the law allows them an exemption from the rules if they can demonstrate economic hardship. That puts customers at risk.

What can be done? Predictably, the two sides in the debate mostly talk past each other, with environmentalists stressing the dangers and water providers focusing on costs and the inflexibility of the laws. For example, the EPA requires testing for dioxin, a possible human carcinogen, but, argues Wayne Kern of the North Dakota department of health, "the industries that are common sources of dioxin just do not exist in North Dakota."

And while admitting that some pollutants are indeed present and dangerous, officials protest that there are limits to what they can do. Radon may cause 200 fatal lung and rectal cancers a year. Yet the Association of California Water Agencies estimates that to eliminate it completely from water in that state alone would cost \$3.7 billion. Is that a reasonable investment for preventing perhaps a score of deaths? Is \$711 million per case of cancer too much to pay for the elimination of pentachlorophenol, a fungicide used in the lumber indus-



Activist Robert F. Kennedy Jr. beside a pipe suspected of dumping waste into a reservoir serving New York City

try, or \$80 billion per case too much to get rid of alachlor, an agricultural chemical?

Water agencies want the revised Safe Water Act to make the EPA take such calculations into account when imposing rules, and to forbid the U.S. government to issue standards without supplying the money it takes to meet them—a position the National Governors' Association has seconded. A 1991 study showed that the cost of meeting environmental mandates will eat up more than 23% of the budget of Columbus, Ohio, by the year 2000—and that assumes no new regulations between now and then. In many cities, the costs of environmental

laws will soon exceed those of police and fire protection.

Something clearly has to give, and several ideas have already surfaced. One is that Congress could finally start offering financial assistance to the small water companies that need it most. Another is to encourage small systems to merge and share costs, an approach that has made headway in South Dakota. The role of the EPA will be crucial. Administrator Carol Browner says she is willing to reconsider the water law's simplistic "one size fits all" approach; she is looking at a strategy that would allow local governments to deal with local problems in their own way without sacrificing national safety standards. Browner also supports a novel proposal in which cities and towns buy up land in watershed areas and regulate its use so that less pollution gets into reservoirs—something New York City is already doing under a court order.

The one thing everyone agrees on in this debate is that rainwater and groundwater are inherently clean; the trouble usually comes when chemicals, sewage and the like seep into water sources. "Are we going to allow pollutants to get in and then attempt to remove them with engineering," asks Robert F. Kennedy Jr., a lawyer with the N.R.D.C., "or is the most sensible way to stop the kind of development that is causing pollution?" The clean-it-up strategy might work for a while, but in the end, prevention makes much more sense.

—Reported by Greg Aunapu/
Miami, Marc Hequet/St. Paul and Dick Thompson/
Washington

solder has been used to join and repair plumbing. Lead solder was banned in 1986, but it is still around in older pipes.

The longer water sits in the system, the more lead it absorbs. So let the water run for at least two minutes, until it is cold to the touch, before using it. That way you're using water from the main lines under the street, which do not contain lead. (Apartment dwellers can't do this if their building's plumbing system is huge). Don't cook with water coming from the hot water tap; it draws more lead from pipes than cold water does.

If you're dissatisfied with your municipal water supply, you can always buy bottled water. But it is not always free of contaminants either (even Perrier had that little problem with the chemical benzene). Look for a seal of approval from NSF International, an Ann Arbor, Michigan, company that certifies bottled water as safe. Unfortunately, NSF does not analyze all brands.

Another option is to buy one of the many filters or other water-purifying devices on the market. Be sure to choose one that specifically removes the toxins turning up in your water. Carbon filters, for example, are good at purging organic compounds, such as pesticides and solvents, but they will not remove minerals or most heavy metals. And one of the more elaborate devices, a distiller, is excellent at taking away heavy metals but is not effective against chloroform and benzene.

Before investing in a treatment device, which ranges from \$30 for a simple filter to \$850 for a reverse-osmosis system, check that it is certified effective by NSF. Above all, remember that home devices need plenty of maintenance. If they are not cleaned or their filters are not replaced regularly, they put back into your water the very pollutants they removed, and they wind up a health hazard themselves.

—By Janice M. Horowitz