The National Report Card on Safe Drinking Water Knowledge, Attitudes and Behaviors

A Survey of Adult Americans

Prepared For:

The National Environmental Education & Training Foundation

July 1999

ROPER STARCH

TURNING DATA INTO INTELLIGENCE WORLDWIDE

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The National Environmental Education & Training Foundation and
Roper Starch Worldwide—*Turning Data into Intelligence Worldwide*

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Forward

On behalf of The National Environmental Education & Training Foundation (NEETF), I am pleased, along with Roper Starch Worldwide, to present to you the first comprehensive assessment of Americans' attitudes, knowledge, and behaviors concerning tap water quality and safety. This nationwide survey/report of American adults is unique in its treatment of this critical subject and makes a number of findings important to water companies and utilities, government agencies, local officials, civic and health leaders, and others concerned with tap water quality. And, it explores what must be done to maintain and protect tap water quality in the future.

There are two prevailing—and some may say *contradictory*—public attitudes about tap water that are revealed in the study. First, most Americans *trust* the quality of their tap water; 91% cook with it and 75% drink it directly from the tap. Especially when compared to other nations, America's 55,000 water companies and utilities are doing well, in the public's mind, in providing pure drinking water.

The second finding is an increasing tendency for Americans to take steps to *lessen* the amount of water they consume directly from the tap. The survey found that 65% of Americans either drink bottled water in the home or filter or boil their water after it leaves the tap. Independent sources indicate that this "mitigation" is a dramatically rising trend. The survey results indicate that much of it is due to concerns people have about the taste, color, and smell of their water (69%) or about stories of pollution in the news (49%).

The study also revealed that about 24% of Americans (some 65 million) say they do not drink water directly from the tap at all. But there is no way yet, without further study, of knowing whether this number of Americans is rising or falling.

Other salient findings in the study show people's hunger for more information about drinking water and reinforce the importance of the right-to-know provisions of the Safe Drinking Water Act which require water providers to report to consumers annually, through Consumer Confidence Reports, on what chemicals, minerals, and other substances are in their tap water.

The study also shows that some water information sources—for example, the media and environmental organizations—are reasonably credible with the public, while others are less so. Ironically some of the most credible sources, such as health professionals, may actually have the least information about the subject.

On the eve of the release of the Consumer Confidence Reports to tens of millions of homes across the nation, this study is timely and will help us assess future impacts of drinking water information and source water protection programs. It will also serve as an important gauge of public concern about the quality and safety of drinking water.

Kevin J. Coyle, President
The National Environmental Education & Training Foundation

Acknowledgments

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Introduction

The year 1999 marks the 25th anniversary of the passage of the Safe Drinking Water Act, the national law that sets in place a framework to provide Americans with safe drinking water. In this 25th anniversary year, unprecedented amounts of new information are becoming available about public drinking water. This year, for the first time, all community water systems (those serving the same customers year-round) will provide their customers with an annual report on the contents and relative quality of their tap water. These reports, called Consumer Confidence Reports in the Act, will contain information about the water sources—surface and groundwater —that are used for drinking water, as well as on any contaminants that may exist in the water after it is treated. Opportunities for public involvement with water suppliers will also be noted.

In 1999, every state is also beginning a statewide Source Water Assessment effort to identify activities that may pose contamination threats to sources of public water supplies and help communities prioritize protection activities.

On the eve of the release of all this new information, The National Environmental Education & Training Foundation (NEETF) commissioned a Roper Starch Worldwide survey to help us all better understand how much information Americans currently get about their tap water and what they think of that information. The water survey was part of a larger survey, conducted by telephone in May 1998, that dealt with people's environmental knowledge, attitudes and behaviors. The water survey assesses where public tap water information comes from and whether or not people are satisfied with the information they are getting. It also asks people what they know about their drinking water, how they use it, and what they are willing to do to protect it. This survey provides a benchmark for understanding people's knowledge about and interest in drinking water, and it will prove useful in assessing the long-term effects of providing public drinking water information.

The Foundation plans to repeat the water survey every two to three years to track whether or not the new information on drinking water included in the Consumer Confidence Reports reaches its intended audience and to determine what effects it has. The survey results will help America's leaders—educators, policy makers, business executives, public interest representatives, media personnel, local, state and federal government officials, and members of the general public—to learn how they can best educate all Americans about the important issues surrounding tap water.

Importantly, this survey establishes a baseline of information about public opinion, knowledge, and behaviors regarding drinking water so the impact of Safe Drinking Water Act public education programs and the Consumer Confidence Reports, in particular, may be assessed and measured in the future.

Readers should note that although the water survey results are being released in July 1999, in this report the survey is sometimes referred to as the 1998 survey, since the actual telephone interviews took place in May 1998.

Highlights Summary

The quality and safety of tap water is a topic close to the hearts of most Americans. Indeed, the water we drink is our most direct and immediate connection to the environment, as it makes up two-thirds of our body weight. In one of the first in-depth analyses of the issue, the 1998 NEETF/Roper water survey examines the public's use of tap water for cooking and consumption, the information people receive about their tap water, their degree of concern about the quality and safety of their tap water, and the public's willingness to take some form of action to help protect the source of their drinking water. A summary of highlights follows:

Americans through their actions demonstrate a basic trust of their public drinking water supplies

- Despite some mixed feelings toward drinking water quality, most Americans believe their tap water is safe and drinkable. Some 75% report that they drink water that comes from the tap, and 91% say they cook with tap water. The fact that nine out of ten Americans consume water directly from the tap indicates a high level of basic trust in the safety and quality of tap water.

- By region, the rate of tap water consumption varies widely, with the lowest rate being 66% in the West, 73% in the Northeast, 79% in the South, and the highest in the Midwest at 80%.

This trust is tempered by a significant and perhaps growing "concern" about the quality of tap water

- The tap water use patterns may not fully reflect public concerns about American water supplies today and in the future. When asked, three out of four adults (76%) express some concern about the quality and safety of their water, with 38% saying they are *very* concerned. Just 7% are not concerned at all. "Concern" is not the same as "worry," and it should be noted that most of the people who express concern still consume tap water in their homes.

- Still 24% of those surveyed (representing some 65 million people) report that they do <u>not</u> drink water straight from the tap for reasons of taste, smell or health and environmental concerns.

- The level of concern expressed is a few percentage points higher among several key subgroups, including women, parents with children in the home, and those who regularly drink bottled water in the home.

- The same approximate level of concern exists between those people who get their water from private wells and those who get their water from public providers.

There is a growing tendency for Americans to filter or boil their tap water or drink bottled water in the home

- Sixty-five percent (65%) of all people either boil their tap water before drinking it, filter it, or use bottled water in the home. The average person has between two and three reasons for doing this—for 69% the main reason for not cooking with or drinking tap water is the taste, smell or color; for 49% it is stories in the news about water pollution; and for 41% it is the convenience of bottled water.

- Research independent of the 1998 NEETF/Roper survey on drinking water shows that the practices of filtering tap water and drinking bottled water in the home have both greatly increased over the past decade.

Americans learn about tap water quality from a variety of sources

- In addition to their own observations on taste, odor, and color, Americans learn about the quality and safety of their tap water from a number of information sources. The media (television, radio, newspapers, and magazines) is the most prevalent source, named by 61% of Americans—considerably higher than city or county governments (39%) and water companies (34%).

- An almost equal percentage of Americans say they receive their tap water information from environmental and public interest groups (31%) as from water companies (34%).

- It is important to note that doctors and other health care providers are currently the least used source of information of drinking water quality and safety (at 14%) of those asked about, even though they are among the most trusted of information sources about tap water.

- Fully 46% of those who open the water bill (as compared to 34% of all Americans) say they receive tap water information from water companies.

The American public wants more reliable tap water information

- People form their opinions of the quality of their tap water based largely on direct experience such as taste and smell (69%) or from stories about pollution or tap water problems reported in the media (49%). In general, the media is a greater source of information about drinking water than water companies, federal, state and local governments; public interest organizations, or health care professionals.

- Americans evidence a desire for more information about the safety and quality of their tap water. The right-to-know provisions of the Safe Drinking Water Act and the resultant annual Consumer Confidence Reports are responsive to a need demonstrated by the American public:

    - Three-quarters of all people who get information about their tap water say they actually read it, but 36% are either not getting any information about their tap water or are not reading the information they do get.

    - While a majority of Americans (58%) are either satisfied or very satisfied with the information they receive about their tap water, four in ten say they are either not too satisfied (22%) or not at all satisfied (18%) with the information received.

    - People currently receiving information from their water companies or the government are a few percentage points more likely to be satisfied, which speaks well for the eventual success of the annual Consumer Confidence Reports program.

    - Those who always or sometimes read the information they receive are 11% more likely to be concerned about their tap water than those who rarely or never read this information.

Many key information sources suffer from somewhat of a credibility gap

- Some of the most important information sources face some credibility issues with the American public. While the media, government, and water companies are currently the greatest sources of tap water information, they are considered to be less believable than environmental or other public interest groups and doctors or other health care providers.

- A majority (58%) says water companies are either very or mostly believable; however, only 17% of Americans say water companies are *very* believable. How water companies are perceived is critical because of their designated role to provide information through the annual Consumer Confidence Reports.

- Those who say they get tap water information from water companies are inclined to actually read any type of tap water information when it is provided (78% compared to 71%).

- Two groups that do not seem to have as much of a credibility gap are medical professionals and nonprofit environmental organizations. Thirty-three percent (33%) of Americans say medical professionals, such as doctors, are very believable (the highest score of any subgroup), and 36% say they are somewhat believable.

- Environmental and public interest groups have a 72% total believability rating (with 19% saying they are very believable). This being the case, health professionals and environmental organizations need to be better educated on the subject of tap water quality.

There is a need for greater understanding of local threats to water supplies

- When asked about local pollution threats to drinking water supplies, 86% of Americans express a high or moderate level of confidence in being able to identify basic threats such as industrial pollution, land-based pollution, or other forms.

- In most states, run-off pollution from farms, roads, parking lots, construction sites and other land-base sources is the major cause of water pollution today—but just less than half of Americans (47%) say that run-off sources are the biggest threat in their area. However, the major threats to drinking water quality are not yet-known—the source water assessments being conducted by states across the U.S. should provide that information in the near future. There is room for more public education on the causes of run-off pollution and what can be done.

- Accurate awareness of pollution threats in a specific area is partially supported by regional variations in survey responses. Twenty-nine percent (29%) of Midwesterners, for example, say that farm waste is a major problem in their area (compared to 11% of those in the Northeast). At the same time, 14% of those in the densely populated Northeast identify land development as an issue, while just 4% of Midwesterners share this opinion.

Many individuals have vague knowledge of their actual water source

- Since this is a subject not often covered in the news, there is reason to believe that many Americans do not know the specific body of water which their drinking water comes from. If this is true, the implication is that Americans will be less likely to understand the need for water source protection.

- The 1998 NEETF/Roper water survey reveals that 74% of adult Americans say they know whether their water source is a well, a reservoir, or a river.

- In addition, 63% of those who say they can name the general source of their tap water are very confident of their answer, and 90% are either very or somewhat confident of their answer.

- It is important to note, however, that 26% of Americans say they do not know, even in general terms, where their water comes from. This is a relatively high number of people to volunteer a "don't know" response in a multiple choice question format. It may also indicate that a significant number of the 74% who say they can identify the general source of their drinking water might actually be guessing.

- The survey also shows that 75% of Americans say they get their water from water companies, and 19% say they own a private well. The majority of these private well owners live in rural areas and small towns.

The survey reveals several special communication needs regarding certain population segments

- An effective public communications program regarding the Consumer Confidence Reports will not begin and end with the mere issuance of the reports. A more targeted strategy that looks at the wide range of groups affected and their specific concerns is called for. The NEETF/Roper water survey underscores the need for defined strategies for groups with high levels of concern and also points out the need to reach out in other ways to those who will not receive the Consumer Confidence Reports, whether they live on a private well or are apartment dwellers.

- ***Parents*** with children at home stand out in the survey as being more concerned (80%) than non-parents (74%) about the quality of their drinking water. Parents are somewhat more inclined to seek advice on drinking water from health professionals, to filter or boil their water, or to use bottled water in the home. This may be due to a heightened level of concern over the health of the family in general and children in particular.

- ***Women*** in America share similar characteristics to parents as a group, and this too may be a reflection of a higher level of concern for health.

- ***Bottled water drinkers*** also stand out as a group with its own characteristics. This is a younger group and (not surprisingly) has the highest expressed concern about safe drinking water of any group in the survey, at 82%.

- ***Private well owners*** (approximately one-fifth of Americans—57% living in rural areas and 19% in small towns) also will require distinct communications strategies. They will not receive the annual Consumer Confidence Reports from water companies. Private well owners have slightly lower levels of concern (71%) about their tap water than do water company customers (78%). Fewer well owners drink bottled water, but the same percentage as the rest of the public (about 25%) say they do not drink water straight from the tap. They appear to be quite interested in drinking water quality information, with 54% saying they always read that information when it is available.

People will use information—They want to act

- When asked how willing they would be to take some sort of action that would help protect the source of their tap water, a majority of adult Americans says it would be at least moderately willing. These actions would include such steps as reducing use of fertilizer and pesticides, attending programs on water conservation, paying a higher water bill to upgrade the water treatment plant, etc. However, the percentage that would be "very willing" drops dramatically from 48% for reducing the use of fertilizers and pesticides to just 18% who would be very willing to volunteer for community projects that prevent water pollution.

- The activity people are most willing to engage in is reducing their use of fertilizers (77%), followed by setting aside land in the community (67%) and attending an educational program (61%).

Recommendations

In looking at the data in the 1998 NEETF/Roper water survey, several key recommendations are indicated:

- The U.S. Environmental Protection Agency, state environmental and health agencies, and drinking water companies should move expeditiously to prepare and distribute supplemental materials to help the public and particularly those to whom the public will turn as drinking water information sources to understand the content and meaning of the Consumer Confidence Reports. This information should include:

    - Interpretations of relative health risk by pollutant found in tap water.
    - Discussion of pollution prevention options.
    - Maps and other graphics showing watershed and wellhead areas and systems.

- The Environmental Protection Agency, state environmental and health agencies, and drinking water companies and utilities should move expeditiously to create and distribute materials to members of the media that will assist them in issuing effective public communications regarding Consumer Confidence Reports.

- The National Institute of Medicine should prepare a study of the education and training needs of doctors and other health professionals and determine the best ways to prepare these professionals to answer the public's questions regarding the quality and safety of drinking water.

- Disseminating tap water information as a way to address the higher risk levels of children and the higher levels of concern evidenced by parents should be made a priority by public agencies and associations concerned with children's health.

- Consumer Confidence Reports modules should be developed and incorporated into the leading environmental education and health education curricula to encourage teachers and students to learn about the importance of drinking water and threats to its quality.

Report Card: Environmental Concerns, Knowledge and Behaviors Regarding Safe Drinking Water in America

In light of the 1996 amendments to the Safe Drinking Water Act regarding the dissemination of information about water sources and the contents of tap water, the 1998 NEETF/Roper water survey has a specific focus. It serves as a benchmark measurement of the public's awareness of, concerns about, and behaviors regarding tap water. It also examines issues such as the public's use of bottled water, the extent to which Americans filter or boil their tap water and Americans' overall willingness to contribute time and/or money to protect their water supplies. From this benchmark data, policy makers will be able to assess the impact of issuing annual Consumer Confidence Reports on the contents and relative quality of individuals' tap water.

This report provides a perspective on: a) whether public information efforts on drinking water are helping people to better understand threats to their source water; b) how people perceive and apprehend the information they receive; c) whether or not they become more confused or concerned over time about the quality and safety of their drinking water; and d) whether or not they will become more involved in addressing the quality of drinking water and water sources in their communities.

A basic finding of this report is that most Americans treat their tap water as if it is safe, but they have mixed feelings. Some 75% of the public drink water from the tap, and 91% cook with tap water. Still, 76% of the public also express "concern" about the quality and safety of their tap water, with 38% saying they are very concerned and just 7% saying they have no concerns at all. A central question raised by the 1998 NEETF/Roper water survey is how much stock we should place on this "concern" when nine out of ten people consume tap water directly through either cooking with it or drinking it.

One interpretation of the weight to give this concern comes from the data in the survey. Americans currently feel cautious enough about tap water quality and safety that two out of three take their own personal measures to either reduce the amount of tap water they consume or to filter and/or boil it before drinking it.

Individuals' Knowledge of Their Water Source

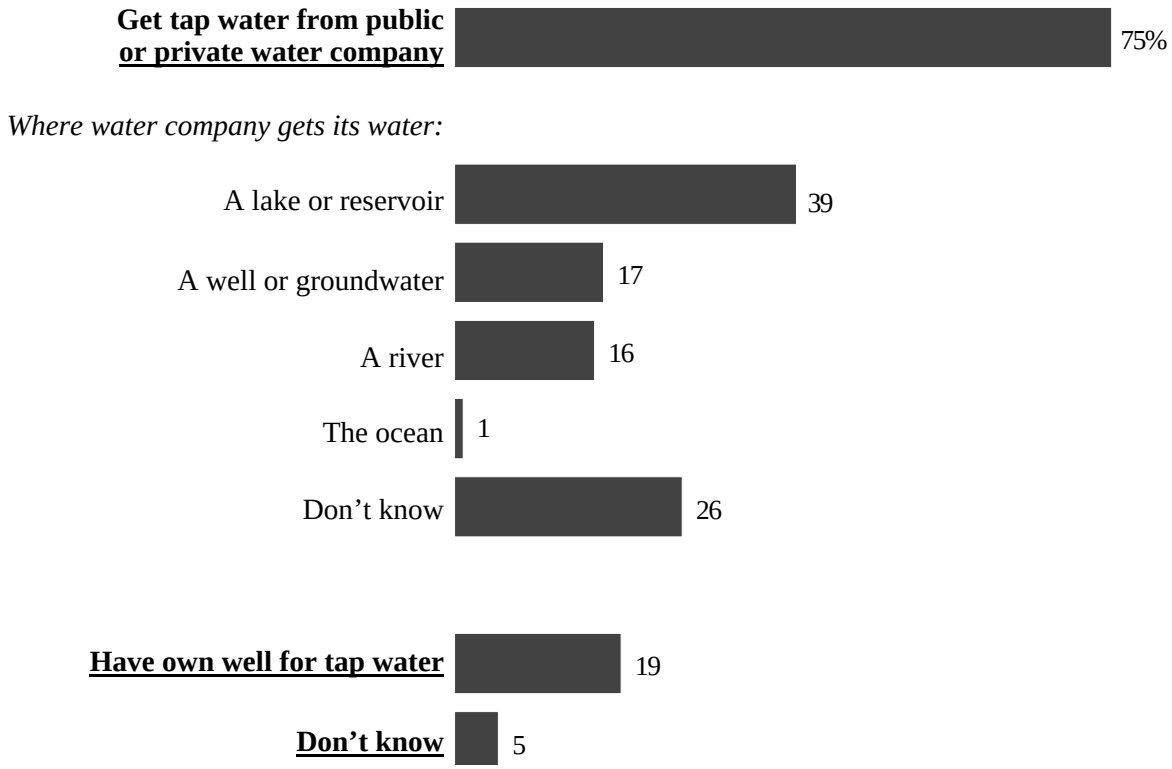
Generally speaking, it is difficult to gauge Americans' specific knowledge of their water company or utility's source for drinking water, particularly since this subject is not often covered in the news. If this is the case, the implication is that Americans will be less likely to understand the need for water source protection efforts such as pollution prevention. The 1998 NEETF/Roper survey reveals that nearly three out of four Americans (74%) say they know whether their source of water is a well, a reservoir, or a river. In addition, 63% of those who say they can name the general source of their tap water are very confident of their answer, and 90% are either very or somewhat confident of their answer.

While "a lake or reservoir" is named most often as the water company's source among those getting drinking water from a public or private water company (39%), 26% report that they "don't know" the source of their water company's tap water. The relatively high number of people who offer the "don't know" response indicates a need for further education on the issue. Also, there is an important gender difference: 19% of men volunteer that they do not know where their water comes from, compared to 32% of women. Throughout the survey, gender often determines differences in attitudes toward water quality and safety.

The survey also indicates that 75% of Americans say they get their water from a water company, while just 19% say they own a private well. There could be a great public benefit if more people recognize how their own actions and that of the communities in which they live can affect their own source of tap water—surface or groundwater—or the drinking water of those living downstream from them.

According to the United States Geological Survey, approximately 49% of residents in the U.S. obtain their drinking water from surface water sources (lakes, rivers, reservoirs) and about 51% obtain their water from ground water wells. Of the respondents in this survey, 55% say that their water comes from surface water sources, and only 36% say that they have a private well or that their water company obtains its water from ground water sources. Again, it is impossible to know from this survey whether individual respondents answered correctly, but given that it is a random sample that is representative of the population, it appears that education about community drinking water sources is needed in order for people to begin protecting their source of drinking water.

Figure I: Source of Household Tap Water



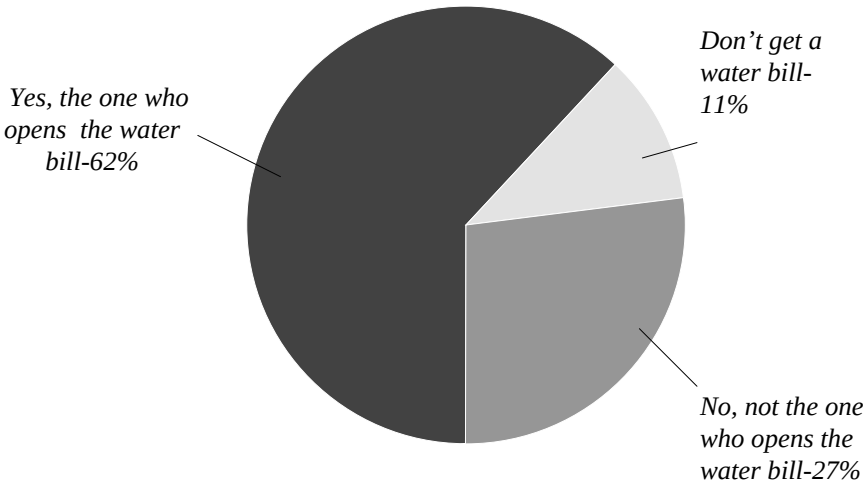
Question Wording: *Which of the following statements describes your household: we have our own well for tap water or we get our tap water from a public or private water company?*
Those who get tap water from a water company were then asked:
Where does the water company get the water they deliver to your home?

Opening the Bill from the Water Company

Most Americans who receive their tap water from a public or private water company must pay for their water. Whether on a monthly, bimonthly or quarterly basis, those who use a water company get a bill in the mail. In some areas, the bill is nothing more than a postcard; in other areas, residents receive a bill in an envelope with supplemental information about the water company and the water it provides to customers. The 1998 NEETF/Roper water survey looks at how the act of opening the bill can affect knowledge and perspectives on water sources and the quality and safety of drinking water.

To assess the impact of opening the water bill on knowledge of and satisfaction with drinking water information, the survey asked Americans whether they personally open the water bill. About six in ten (62%) say they open the water bill, while 27% say someone else opens the bill. One in ten says he or she does not receive a water bill.

Figure II: Whether or Not Respondent Opens the Water Bill



***Question Wording**: Are you the person in the household who opens the water bill? (Asked of those who do not have their own well for tap water.)*

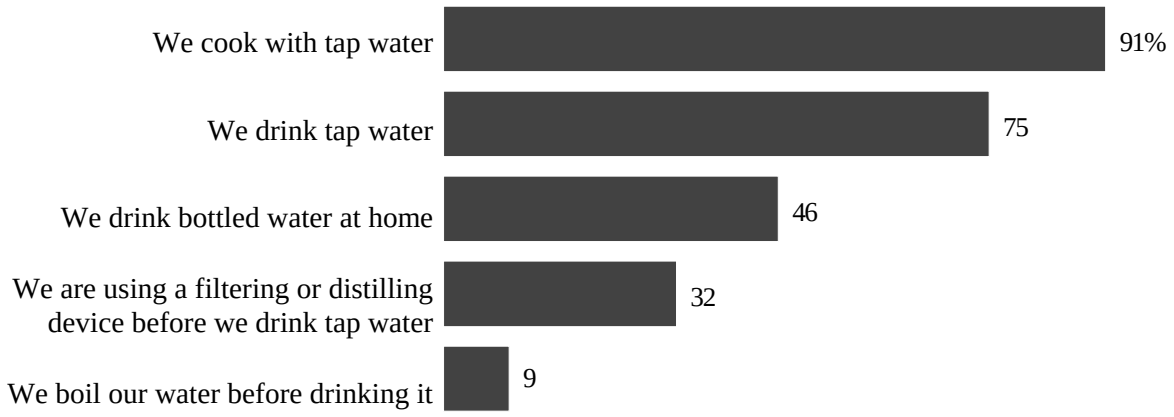
Water Characteristics of American Households

Apart from whether they get their water from a private well or a water company, Americans were asked a few questions about their use of tap water. As noted in the findings, the vast majority (91%) reports that it cooks with tap water. In addition, 75% say that they drink water from their tap. Just 9% say they usually boil their tap water before drinking it. One could make the case that few Americans see problems with their tap water, as evidenced by these actions. One basic finding in this report is that a large majority of Americans treat tap water as though it is safe.

Sixty-five percent (65%) of Americans either boil their tap water before drinking it, filter it, or drink bottled water in the home. The average person has between two and three reasons for doing so—for 69% the main reason for not cooking with or drinking tap water is the taste, smell, or color; for 49% it is stories in the news about water pollution; and for 41% it is the convenience of bottled water.

It is telling, however, that almost one in four Americans (24%) says he or she does not drink tap water. This represents approximately 65 million people who seem less confused or ambivalent than most about the quality and/or safety of drinking water. Still, a majority of these people cook with tap water.

Figure III: Water Characteristics of American Households



***Question Wording**: Please tell me whether each of the following statements describes your household or not.*

There are a number of other interesting factors affecting household use of tap water. Age is one such factor. The percentage of people who drink tap water increases with age, from 72% among those 18 to 34, to 82% among those age 65 and older. Conversely, the use of bottled water at home decreases with age, from 60% among those 18 to 34, to 45% among those 35 to 44, to 41% among those 45 to 64, to 30% among those age 65 and older.

There are regional differences in households' use of tap water. For example, drinking tap water is more common among Americans residing in central and southern parts of the nation (80% in the Midwest; 79% in the South) than among those living in the Northeast (73%) or in the West (66%). In contrast, the number of people who boil tap water before drinking it is higher in the Northeast (14%) than elsewhere. The regional use of bottled water at home for drinking purposes, though, does not appear to be linked directly to tap water: only the Midwest (38%) diverges markedly from the national average (46%).

Figure IV: Water Characteristics of American Households by Region

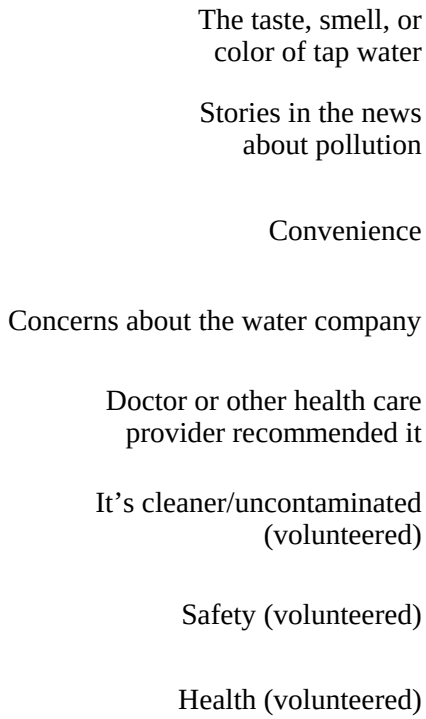
		Region			
	Total	**Northeast**	**Midwest**	**South**	**West**
	%	**%**	**%**	**%**	**%**
We cook with tap water	91	93	92	94	85
We drink tap water	75	73	80	79	66
We drink bottled water	46	49	38	49	47
We use a filtering or distilling device before we drink tap water	32	33	29	32	36
We boil our water before drinking	9	14	4	11	8

***Question Wording**: Please tell me whether each of the following statements describe your household or not. First/Next…*

Evidence of Concern over the Quality and Safety of Tap Water

Americans who use bottled water at home, use a filter or distilling device for their tap water, or boil their tap water before use, were asked their reason for doing so. The main reason for not cooking with or drinking tap water is the taste, smell, or color of tap water, cited by 69% of this group. About half (49%) agree that stories in the news about water pollution are a reason for avoiding tap water, while the convenience of bottled water is a reason given by 41%.

Figure V: Top Reasons for Drinking Bottled Water or Boiling, Filtering or Distilling Tap Water



***Question Wording**: Which of the following statements, if any, describe your reasons for boiling, filtering, distilling, or using bottled water? Is it for…(Ask about each.)*

(Asked of those who boil, filter, distill, or drink bottled water.)

A few subgroup differences emerge from responses to this question. Women (76%) are significantly more likely than men (62%) to turn away from tap water to bottled water (see previous section) due to the taste, smell, or color of tap water. Men, by comparison, cite convenience as a reason more often than women, by a 47% to 36% margin. The two sexes are nearly equally affected by stories in the news about water pollution (men: 50%; women: 48%).

Those living in the Northeast (53%) and West (52%) are more likely than those living in the Midwest (45%) or South (45%) to cite stories in the news about water pollution as a reason for boiling, filtering, or distilling tap water or using bottled water. It is interesting to note that these results complement the findings concerning regional differences in the drinking of tap water across the country—lower in the West and Northeast and higher in the Midwest and South.

Those whose tap water comes from a water company are a few percentage points more likely to give "taste, smell, or color" or "stories in the news about water pollution" as reasons to boil, filter, or distill tap water or use bottled water than private well owners. This difference in reactions to stories in the news about water pollution is important because those with their own well may be ignoring or misunderstanding the threats that exist to their drinking water.

There are certainly public benefits to Americans being aware that many water systems are vulnerable to pollution, whether a well or a reservoir, and they should know about the quality and safety of water that flows from the faucets in their homes.

How People Learn about Tap Water Quality

In addition to their own observations on taste, odor or color, Americans learn about the quality and safety of their tap water from a number of informational sources. Television, radio, newspapers, and magazines are the primary sources, named by 61% of Americans, while two other sources are named by one-third or more of the public: city or county government (39%), and water companies (34%). Environmental and public interest groups (at 31%) are statistically the same as water companies as current sources of information. (For the survey, these sources were asked about individually and thus are not mutually exclusive.)

Like most topics, the popular media—television, radio, newspapers, and magazines—is the primary source of information about water quality and safety. Of the many potential sources of information, only the media is named by a majority of Americans.

The new provisions of the Safe Drinking Water Act focus on increasing the information provided to consumers by water companies; currently only 34% of Americans say they get such information from these companies. Still, the 1998 NEETF/Roper water survey provides reason for optimism on the role of water companies as information providers. The survey shows that 45% of Westerners (California water systems already provide annual reports), as compared to an average of 31% of those in other regions, say they get information from water companies.

This last finding is supported by the fact that 39% of Americans *always* and 34% *sometimes* read the information received about water quality and safety. (See next section for details.) This "total read" figure climbs to 78% among those who receive tap water information from their water company.

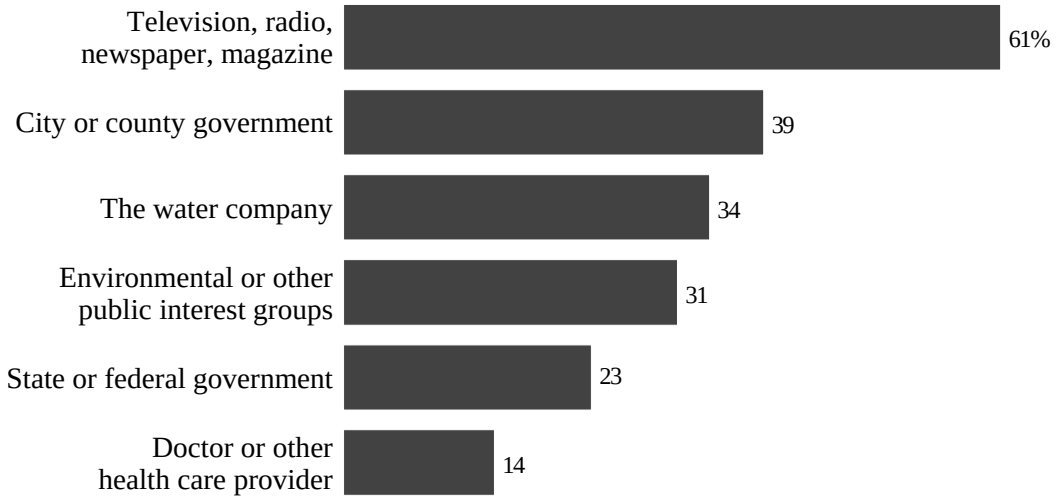
Even though water companies are not currently a source of tap water information for two out of three Americans, there is room for optimism on the future role of these companies in providing tap water content information to the public. This comes from the fact that 46% of those who say they open the water bill (as compared to 34% of all Americans) also say they receive tap water information from their water company. By comparison, an equal number of "bill openers" and "non-bill openers" get tap water information from the media, and there is also no statistical difference between the two groups for receiving water information from city and county government.

The type of residence also determines the use of water companies as a source of information. Whereas 36% of house dwellers say they get tap water information from the water company, this falls to 27% among apartment dwellers. Again, there is little statistical difference between these two groups when the media is examined as an information source (about 60% for each).

The only differences in sources used, by age or education level, are for environmental or other public interest groups (increasing from 28% among high school graduates to 40% among college graduates) and state or federal government (increasing from 21% among high school graduates to 29% among college graduates).

It is noteworthy that doctors and health care providers (at 14%) are currently rated as the least used source of information on drinking water quality and safety, even though they are among the most trusted of information sources.

Figure VI: Source of Information about Tap Water Quality and Safety

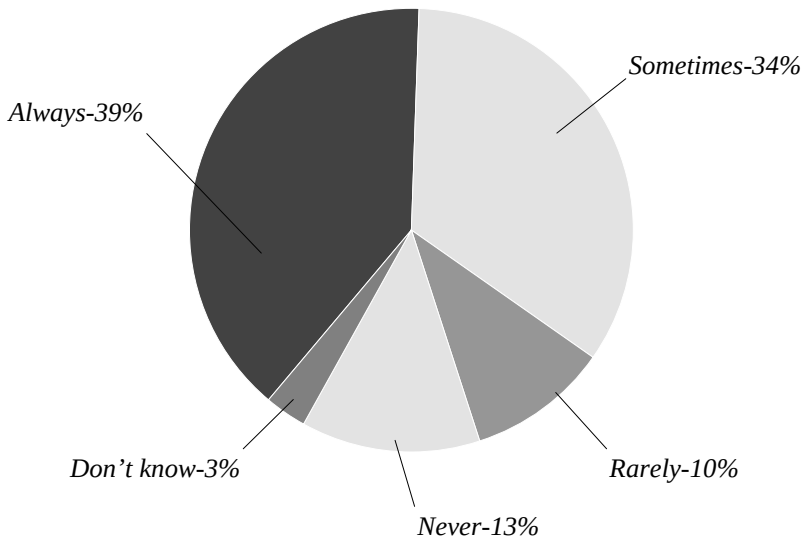


Question Wording: *From which of the following sources do you receive information about the quality and safety of your household's tap water? Do you get water information from… (Ask about each.)*

Do People Read Drinking Water Information?

For the most part, Americans do appear to be reading the information they receive about water quality and safety. Some 39% say they always read this information, while an additional 34% sometimes read this information. The frequency with which Americans read the information about tap water quality and safety is similar among most subgroups, with one notable exception. The "total read" figure increases dramatically by a self-reported level of environmental knowledge. It increases from 62% of those who say they know only a little or practically nothing about environmental issues, to 78% among those who say they know a fair amount, and 79% among those who say they know a lot about the environment.

Figure VII: Frequency of Reading Information Received about Quality and Safety of Tap Water



Question Wording: *Do you always, sometimes, rarely, or never read the information you receive about the quality and safety of your tap water? (Asked of those who receive this information from any source.)*

High Level of "Concern" about the Safety of Drinking Water

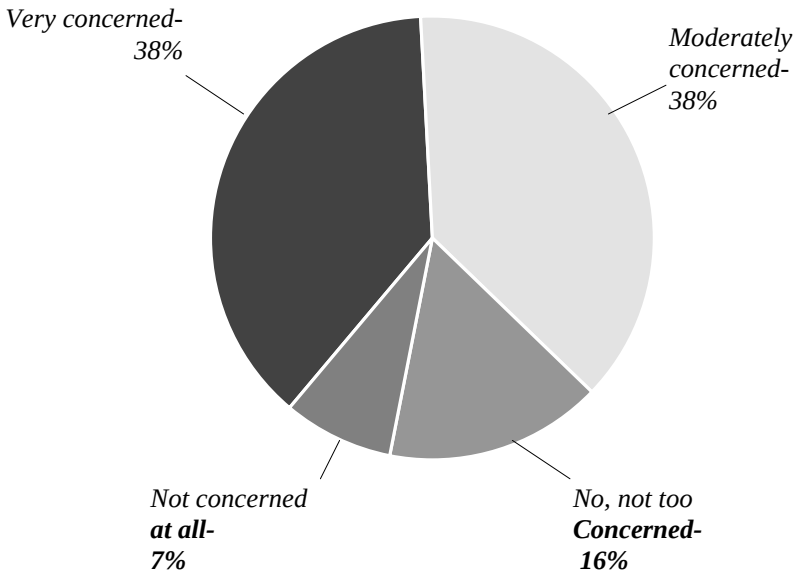
In a nation that works to provide safe drinking water to virtually all of its residents, a surprising number of Americans are concerned about the quality and safety of their tap water. This reflects the mixed feelings many Americans have about their tap water—they act as if it is safe, but they still wonder if it is all right to drink. Indeed, 38% of Americans say they are *very* concerned about their tap water and another 38% say they are *moderately* concerned. Just 7% of Americans express no concern at all. "Concern" is not the same as "worry," and it should be noted that most people who express concern still consume tap water in their homes. The results of this question might mean that most Americans do not know for sure whether their tap water is completely safe or that they are concerned that it may not be safe in the future. This is a question that we plan to follow up on in the future.

It is important to remember that despite this reported "concern," 75% of respondents report that they drink their tap water. Concern also varies by geography. Just 72% of those who live in the West say they are concerned about the quality and safety of their tap water, compared to 77% in the Midwest, 78% in the Northeast, and 79% in the South.

There is a clear gender difference on tap water safety and quality concern. Women are seven percentage points more likely (at 80%) to be concerned than men (73%), perhaps indicating a concern for family health. Parents with children at home are six percentage points (at 80%) more likely than non-parents (74%) to be concerned about tap water quality and safety, perhaps also reflecting a health concern. Or, perhaps this could be related to the overall younger age of adults with children still at home.

Concern about tap water quality and safety manifests itself in another way—consumption of bottled water. Americans who say they drink bottled water at home are 10 percentage points more likely to say they are either very or moderately concerned about their tap water versus those who do not drink bottled water at home (82% versus 72%).

Figure VIII: Level of Concern about Quality and Safety of Tap Water



***Question Wording**: Overall, would you say you are very concerned, moderately concerned, not too concerned, or not concerned at all about the quality and safety of your tap water?*

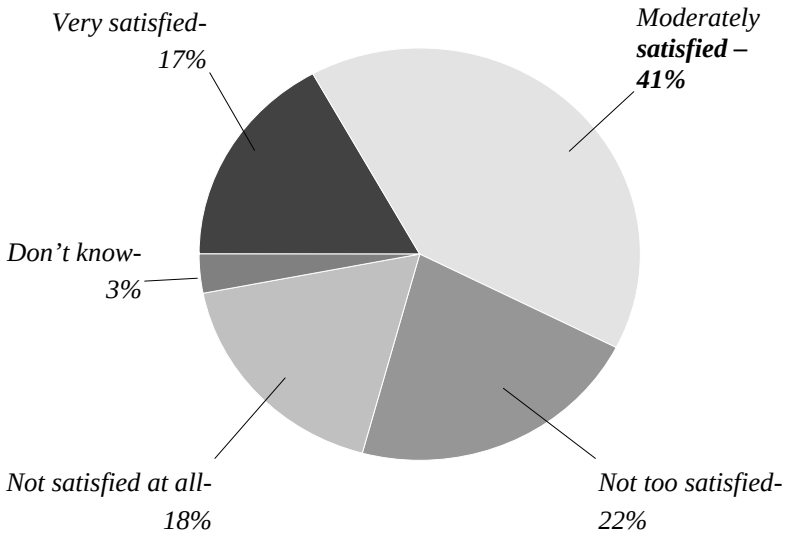
However, level of education has a small inverse effect on concern about the quality and safety of tap water. While 79% of those with a high school education or less express concern, 70% of college graduates express concern. These differences do not seem to be related to type of residence (house versus apartment) or the type of town in which people reside (large, suburb, rural).

Satisfaction with Current Tap Water Information

In addition to being concerned about their tap water, many Americans express a desire for additional information on the subject. In fact, four Americans in ten are either "not too satisfied" (22%) or "not satisfied at all" (18%) with the information they currently receive about the quality and safety of their tap water. Still, 41% say they are "moderately satisfied" with the tap water information they receive, while 17% say they are "very satisfied," for a total of 58%.

People who currently receive information about their tap water are likely to be satisfied with this information. The level of satisfaction varies by the source of information. Of the many sources of tap water information, people are most likely to be satisfied with the information they receive from the state or federal government—75% of those receiving information from the state or federal government (16 % of all Americans) are satisfied with it. Nearly as many (72%) of those receiving tap water information from their water companies are satisfied; 70% of those receiving information from their local government are satisfied; and 65% of those receiving information from their doctors or from environmental groups are satisfied. However, while the media is the single greatest source of tap water information, it has the lowest satisfaction score—59%.

Figure IX: Satisfaction with Current Amount of Information about Quality and Safety of Tap Water



***Question Wording**: How satisfied are you with the current amount of information you receive about the quality and safety of your tap water? Would you say you are very satisfied, moderately satisfied, not too satisfied, or not satisfied at all?*

There is a dramatic difference in satisfaction with information received between older and younger Americans. Whereas 67% of those age 65 and older are at least moderately satisfied with the information they receive about tap water quality and safety, this figure dips to about 60% among those 35 to 64 and falls to 48% of those aged 18 to 34. Part of the dissatisfaction among Americans 18 to 34 may stem from lower percentages who reside in a house rather than an apartment, and the smaller likelihood of opening the water bill and seeing the information it may contain. However, this does not appear to be the sole factor, as the oldest and youngest adult Americans are equally likely to receive information about tap water from the media, government and environmental groups. Moreover, as concern about tap water quality and safety is similar among the two groups, it may be simply that younger Americans pay more attention to the issue, which may also explain the higher use of bottled water discussed earlier.

Westerners (at 62%) are somewhat more likely than those living in other parts of the country to say they are at least moderately satisfied with the information they currently receive about their tap water (compared to Americans in the South: 58%, Northeast: 55%, and Midwest: 54%).

Importantly, there is a direct link between concern about tap water and satisfaction with information received about it—the more concerned people are about tap water, the less satisfied they are with the information they currently receive about it. We need to explore this issue in future surveys.

As with concern about tap water quality and safety, there is a direct relationship between satisfaction with information received about tap water and the use of bottled water or filtering devices at home. Americans who say they drink bottled water at home are 15 percentage points *less* likely than those who do not drink bottled water at home to say they are either very or somewhat satisfied with the information they receive about their tap water (49% versus 64%). Similarly, Americans who use a filtering or distilling device before drinking their tap water are eight percentage points *less* likely than those who do not use such devices to say they are either very or somewhat satisfied with the information they receive about their tap water (52% versus 60%).

While concern about tap water and satisfaction with information received about tap water quality and safety may not be the only reasons that people use bottled water or filtering and distilling devices, it is clear that these are factors in some people's decisions to avoid using tap water.

Information Credibility—Believability of Key Groups

Knowing the public's concern about the quality and safety of its tap water, its satisfaction with the information currently received on the subject and the sources from which the public receives that information, how believable are the key sources to the average American? Some information sources face credibility issues among the American public. While the media, government, and water companies are the most likely sources of tap water information, they are considered less believable than environmental or other public interest groups and doctors or other health care providers. Even though only about a third of the adult population says it actually receives information about tap water from environmental and other public interest groups, fully 72% find the information these groups provide to be either "very" (19%) or "mostly" (53%) believable, the top ranked source.

Nearly as many (69%) say they would believe the information about tap water quality and safety their doctor or other health care provider gave them. However, one may want to consider that health professionals were (at 14%) the least likely to be a current source of this information. People who receive tap water information from television, radio, newspapers or magazines (61%) say these sources provide information that is at least "mostly believable" (65%).

At the other end of the spectrum are water companies, which are featured prominently in the public communications (or right-to-know) approaches set out in the Safe Drinking Water Act's Consumer Confidence Reports program. But, just 17% of Americans say they are *very* believable. Still, a majority of the public (58%) says these companies are either very or mostly believable.

The reason for a mixed "believability" review of water companies by the public is not clear, but one in three of those who boil, filter, distill, or use bottled water say the reason for doing so comes from concerns about the water company. Moreover, nearly half (46%) of the people who boil, filter, or use bottled water and say they are *very* concerned about the quality and safety of their tap water, point to water companies as the cause of their concern. The long-term prospects for water company credibility seem good. The NEETF/Roper water survey indicates that if the public receives information from their water companies, they have more confidence in the quality of their drinking water.

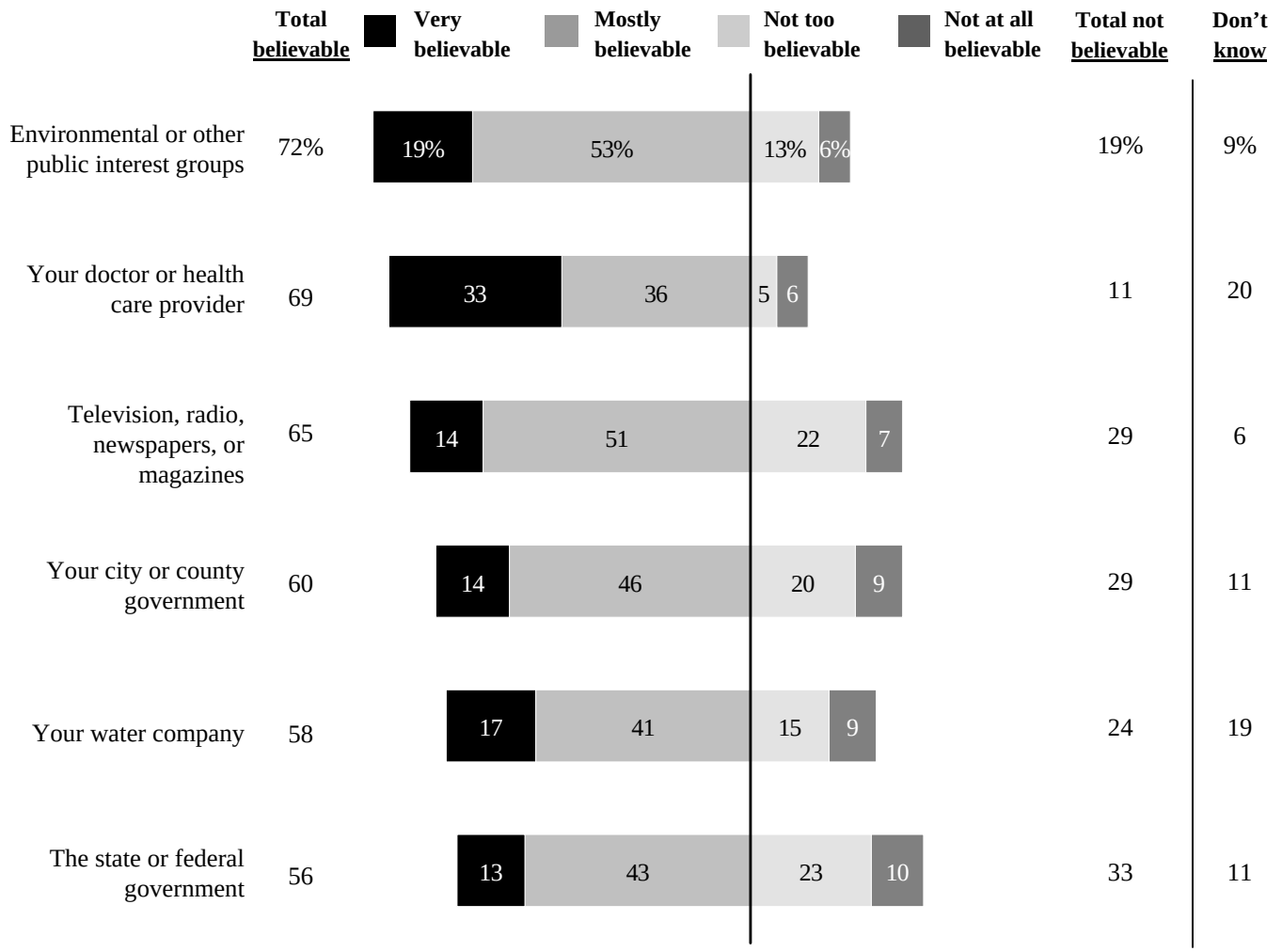
Indeed, when people get drinking water information from a source, they find that source more believable. This is especially true for water companies, which have the biggest gain in credibility among the sources listed who provide drinking water information. Fifty-eight percent (58%) of respondents say they would consider tap water information provided by their water company to be mostly or very believable. Among respondents who say they currently receive information from their water company, 79% say they find it mostly or very believable.

The level of satisfaction with the amount of drinking water information received increases as people get information from the sources asked about in the survey. Fifty-eight percent (58%) of respondents say they are either satisfied or very satisfied with the amount of information they are getting about their tap water. People who are most satisfied with the amount of information they receive are those who get the information from the government or from their water company.

But a different message comes across in the data about concern for the quality and safety of tap water. In the West, where 45% say they get information from the water company, just 30% say their concern has to do with the water company. This compares to 37% expressing such concern in the Northeast and 36% in the Midwest (where water companies provide less information).

As noted above, two groups that do not seem to have much of a credibility gap are doctors (69% believability, with 33% *very* believable—the highest of any group), and environmental and public interest groups that top the chart for *total* believability, with a 72% rating. Public education alliances with these two information sources would be beneficial to the success of public right-to-know efforts concerning safe drinking water. These particular groups know less about the technical and scientific aspects of drinking water quality and safety than water companies and public agencies such as those that protect the environment and public health.

Figure X: Extent to which Sources of Information about Water Quality and Safety are Believable



***Question Wording**: There are many sources of information about water quality and safety. For each of the following sources, please tell me the extent to which you would believe the information it gives you about the quality and safety of your household tap water.*

There are also important variations in the believability of sources based on education levels—believability increases as the education level increases. Thus, whereas 57% of those with a high school education or less say they would believe information about tap water quality and safety provided by city or county governments, 62% of those with some college and 67% of those who completed college say they would believe city or county governments. For state and federal governments, the percentage believing any information sent about tap water increases from 53% among those with no more than a high school education to 64% among college graduates. In addition, belief in information sent by a water company increases somewhat from 54% among those with a high school education or less to 62% among college graduates.

By region, Northeasterners in general find tap water information less believable whether provided by city or county governments (52% versus 60% overall), water companies (51% versus 58% overall), or state and federal governments (49% versus 56% overall). Southerners are especially likely to believe information sent by environmental or public interest groups (77% versus 72% overall). And Westerners are the most likely to believe information sent by water companies (63% versus 58% overall), no doubt due in part to the fact that they currently receive more information from water companies than residents of other parts of the nation.

Importantly, Americans clearly identify three sources that could be doing a better job at providing information about tap water quality and safety. City and county governments, water companies, as well as state and federal governments face a credibility gap among those who are least satisfied with the information currently received about their tap water. About two-thirds of those Americans who are very or moderately satisfied with the tap water information they receive believe the information that is provided by governments and water companies. This falls to below 50% among those who are not too or not at all satisfied with the information they currently receive about their tap water. People who are not satisfied with the quality of their drinking water are receiving little or no information.

Knowledge of Local Threats to Water Supplies

When asked about local pollution threats to drinking water supplies, 86% of Americans express a high or moderate level of confidence in being able to identify a variety of basic issues, such as industrial pollution, land-based pollution, or other forms. In most states, run-off pollution from farms, roads, parking lots, construction sites, and other land-base sources are in fact the leading cause of water pollution today. However, the major threats to drinking water quality are not yet known—the source water assessments being conducted by states across the U.S. should provide that information in the near future.

In this survey, 47% of Americans say that run-off sources are the biggest threat to drinking water in their area (including farm chemicals and livestock waste, surface water running off yards and city streets, as well as construction and land development). This compares to 41% who say that point sources, such as waste dumped by factories and sewage treatment sources, are the greatest local drinking water threats. Another 12% do not know or state another answer that was not listed as a survey choice. Since threats to local drinking water supplies vary widely by community, it is impossible to determine the accuracy of the respondents' answers. Therefore, the survey asked how confident respondents were with their answers about threats to their local water supplies. Eighty-six percent (86%) were somewhat or very confident with their answers. It appears that people think they know more about pollution threats to local water supplies than they do about the actual sources of their water (from earlier survey question).

One goal of the provisions of the 1996 Safe Drinking Water Act is to encourage public education on the source of water supplies. There can be great public benefit to having a public that is keenly aware of where its water comes from and what activities threaten its quality. Toward that end, each state is conducting an assessment of water sources known as a Source Water Assessment. The theory behind assessments is to provide information to help communities prioritize contamination threats. The communities may then work to protect their water supplies.

Americans' Willingness to Take Action to Protect their Source of Drinking Water

Beyond concern about tap water quality, sources of information about tap water, and threats to tap water, are Americans willing to take action to protect their source of drinking water? One-half or more say they would be at least moderately willing to engage in each of six activities under consideration. The activity with the greatest support is reducing use of fertilizers and pesticides, for which three-quarters are either very (48%) or somewhat (29%) willing to do. More than six in ten Americans say they would be willing to work with their community to set aside land to help protect water (67%) or to attend educational programs on preventing water pollution (61%).

It is important to note that the percentage saying they would be "very willing" to perform an activity declines dramatically from 48% for reducing use of fertilizers and pesticides, to 24% for attending a program on water pollution prevention, to 18% for writing letters calling for increased environmental regulations. This disparity may be due in large part to current attitudes and behaviors toward the environment.

For example, Americans who think current environmental laws do not go far enough are three times as likely as those who think current laws go too far to say they would be very willing to write letters for increased environmental regulations to protect the environment (23% versus 8%). Similarly, those who already *frequently* avoid using chemicals in their yard and garden are more likely than those who *never* avoid chemicals in the garden to be very willing to reduce their use of fertilizers and pesticides to protect their source of drinking water (58% versus 43%). In other words, the public's predisposition toward the environment affects their willingness to engage in various activities to protect the environment and their supply of drinking water.

A majority of Americans expresses an interest in engaging in a wide range of activities that could improve the quality of drinking water supplies in their area. For example, to help prevent water pollution, 48% of adult Americans say they would be *very* willing to reduce the use of fertilizers and pesticides to protect drinking water, and a total of 76% are either very or somewhat willing to take such actions. Fully 80% of women are willing to reduce the use of fertilizers and pesticides, compared to 72% of men. There are also regional differences in the willingness to reduce fertilizer use, with a high of 80% in the Midwest and a low of 73% in the Northeast. As evidence that there is widespread concern about fertilizers and pesticides as threats to water quality, there is no statistical difference between well owners (75%) and water company customers (78%) to reduce the use of these products.

When asked about their willingness to pay a higher water bill to help finance additional water treatment, just 19% of adult Americans say they are very willing. A plurality of men (at 46%) express some willingness to pay more for water treatment while a majority of women (54%) are willing. There does not seem to be any major variation by region, but there is considerable variation on this point by level of education. Just 45% of those with no more than a high school education are willing to pay more while 62% of those with a college education are willing. It is not surprising that just 36% of private well owners are willing to pay more while 54% of water company customers are willing. And 56% of bottled water drinkers say they are willing to pay more, while just 45% of those who do not drink bottled water express such willingness.

As noted above, education could also be a major factor in making people aware of the quality of their drinking water supplies and any threats to those supplies that might exist. About six adult Americans in ten (61%) say they are willing to attend educational programs concerning water conservation and pollution prevention, with 24% saying they are "very" willing to attend such programs. At 63%, women are slightly more willing than men (at 58%) to attend educational programs. Bottled water drinkers (at 66%) once again stand out as among the most willing Americans to participate in educational efforts to help protect water supplies, compared to 57% of those who do not drink bottled water.

There is again a notable difference by region, with Midwesterners (69%) expressing more willingness than other regions, such as the Northeast (56%) and the West (55%), to attend educational programs. Well owners express the same level of willingness to attend educational programs (61%) as do water company customers (61%).

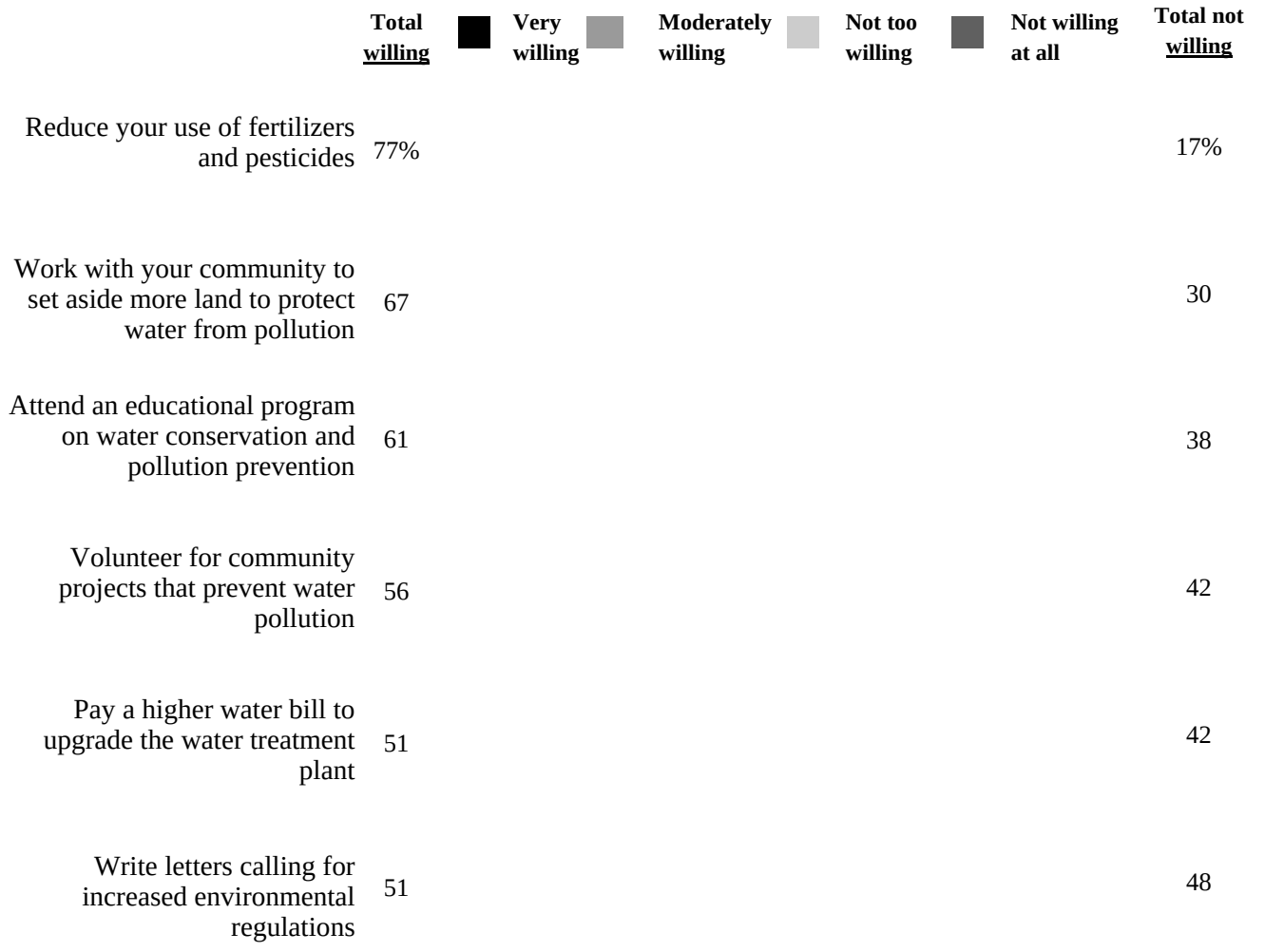
Another possible community response to protecting water supplies is to set aside natural lands in watershed and groundwater recharge areas. Natural land not only keeps certain human activities from polluting water bodies, but the soils and vegetation of such lands also have a cleansing effect on water that passes through them.

Two-thirds (66%) of Americans are willing to work with their communities to see that lands are set aside in their communities for water protection, with 27% saying they are "very" willing. Men and women are equally willing to promote this development, and bottled water drinkers are 14 percentage points more willing than non-bottled water drinkers to see land set aside for this purpose (74% versus 60%).

More than half (58%) of adult Americans are also willing to volunteer for community projects that will protect or clean up water supplies, with 19% saying they are "very" willing.

All in all, a majority of Americans say they are willing to get involved in activities that protect water supplies.

Figure XI. Willingness to Perform Activities to Protect Source of Drinking Water



***Question Wording**: Please tell me whether you would be very willing, moderately willing, not too willing or not willing at all to engage in the following activities to protect your source of drinking water.*

There is a direct relationship between concern about the quality and safety of tap water and willingness to take action to protect tap water. Thus, Americans who are very concerned about their tap water are more likely to be very or somewhat willing to engage in several of the listed activities to protect their tap water than those who are moderately concerned or not concerned about tap water quality and safety. This pattern is especially noticeable for those willing to volunteer for community projects that prevent water pollution (30 percentage points higher among those very concerned than among those not too/not at all concerned). And it is notable for those willing to "write letters calling for increased environmental regulations" (28 percentage points higher among those very concerned than among those not too/not at all concerned).

Figure XII. Concern about Tap Water Quality as Related to Willingness to Take Action to Protect Tap Water

Willingness to Take Action to Protect Tap Water, by Concern About Tap Water	Concern about Tap Water Quality and Safety			
	Total	Very concerned	Moderately concerned	Not too/ Not at all concerned
	%	%	%	%
Reduce your use of fertilizers and pesticides	76	77	82	67
Work with your community to set aside land to protect water from pollution	67	72	66	56
Attend an educational program on water conservation and pollution prevention	61	70	64	43
Volunteer for community projects that prevent water pollution	56	68	56	38
Write letters calling for increased environmental regulations	51	59	54	31
Pay a higher water bill to upgrade water treatment plant	51	53	50	47

Question Wording: *Please tell me whether you would be very willing, moderately willing, not too willing or not willing at all to engage in the following activities to protect your source of drinking water.*

Question Wording: *Overall, would you say you are very concerned, moderately concerned, not too concerned or not concerned at all about the quality and safety of your tap water?*

There are a few consistent trends among two other subgroups regarding willingness to engage in activities to protect sources of drinking water. Americans age 65 and over, are *less* willing than those under age 65 to engage in each of the listed activities. And those who currently drink bottled water at home are *more* willing than those not drinking bottled water at home to engage in each of the listed activities. For example, whereas 42% of those age 65 and older would be willing to pay a higher water bill to upgrade a water treatment plant, this figure climbs to 50% of those 35 to 64 and 56% of those 18 to 24. With regard to consumption of bottled water, whereas 50% of those who do not drink bottled water at home would be at least moderately willing to volunteer for community projects that prevent water pollution, this figure climbs to 74% among those Americans who do drink bottled water at home.

Views of Parents Concerning Tap Water Safety—Children's Health

In the 1998 NEETF/Roper water survey, the attitudes and activities of parents with children living in the home ("active parents") often stand out from other groups. This data is particularly relevant given an emerging focus on the impact of the environment and the health of children. Moreover, parents in the survey sample are a younger group (average age 37) than non-parents in the survey (average age 47), and seem to show more of a concern for health than non-parents. This is evident in how they think about and work with doctors and other health professionals. For example, while 17% of parents report they get information on the quality of their tap water from health professionals, just 12% of non-parents do so.

In addition, 79% of parents consider health professionals to be reliable sources of information about tap water safety, as compared to 62% of non-parents. The stronger relationship of parents to health care providers is not well understood, but may have to do with concern about family health, or may relate to the more regular contact that parents have with primary care providers and pediatric specialists. Given their specialty, pediatricians, for example, tend to be more concerned than other health practitioners about the unique sensitivities of children to environmental risks.

Active parents' concern for health and safe water can also be seen in the fact that 80% express concern about the quality of their tap water, compared to 74% of non-parents. Active parents are as likely as the public as a whole to avoid drinking direct tap water, yet 50% of active parents versus 44% of other adults say they drink bottled water in the home.

Active parents seem to be on the lookout for more information about tap water safety in general. More than seven in ten (73%) consider the media to be a reliable source of information (as compared to 60% of non-parents) and 76% of active parents trust environmental groups as a source of information about tap water, as compared to 69% of non-parents.

There is also evidence that active parents are more willing than other adults to take direct, personal action to protect water supplies. Parents are more likely to reduce the use of pesticides in lawn care (80% versus 73%) and to support the setting aside of land to protect water supplies (72% versus 63%). Additionally, they are more willing to volunteer their time to prevent water pollution (63% versus 52%).

Unique Characteristics of Bottled Water Drinkers

Those who drink bottled water at home on a regular basis also emerged from this drinking water survey as a group with special characteristics. Bottled water drinkers are younger (mean age of 40, as compared to 46 for those who do not drink bottled water in the home) and tend to be more pro-environment in their attitudes. For example, 75% say they would choose the environment over the economy if a choice must be made, while 66% of those who do not drink bottled water would make the same choice.

Other differences between bottled water drinkers and those who do not drink bottled water in the home are evident in participation in pro-environment activities. For example, 60% of bottled water drinkers say they frequently purchase biodegradable or recyclable products compared to 47% among those who do not drink bottled water. Similarly, 23% of bottled water drinkers say they *frequently* use vehicles other than cars (such as buses or bikes) as means of transportation, as opposed to 14% of those who do not drink bottled water.

Bottled water drinkers are also more supportive of government regulation of the environment than non-bottled water drinkers. Just 11% say they feel government regulation of the environment has gone too far, while 22% of those who do not drink bottled water say they hold that belief. At the same time, 57% of bottled water drinkers think environmental regulations should go further, as compared to just 39% of others Americans. The same pattern holds true for views of regulation of air pollution, water pollution, wetlands, endangered species, and the protection of wild and natural areas. For example, 81% of those who drink bottled water think that water pollution regulation should go further, as compared to 67% of those who do not drink bottled water in the home.

Bottled water drinkers are also somewhat more worried about our environmental future than those who do not drink bottled water—62% feel that the planet could face a major environmental catastrophe in the next ten years, compared to 55% of those who do not drink bottled water at home.

Bottled water drinkers are also "information hungry" and look to many sources to learn about tap water safety. Bottled water drinkers are more likely to get their information from the following sources (compared to non-bottled water drinkers):

- Media and newspapers (65% versus 57%).
- Health care providers (16% versus 12%).
- Environmental groups (35% versus 27%).

Moreover, 71% of bottled water drinkers say they believe doctors are reliable sources of information about tap water, as compared to 66% of non-bottled water drinkers. And, bottled water drinkers are more likely to believe the information provided by environmental groups (78% versus 67%).

There are several other marked differences between bottled water drinkers and non-bottled water drinkers with respect to use of tap water. Bottled water drinkers are:

- Twice as likely (16% versus 8%) to say they have chosen not to drink tap water without boiling, filtering, or some other treatment based on the advice of a health professional.
- Less satisfied with the information they are receiving on tap water (49% versus 64%).
- The most concerned about the safety of their tap water (82%).
- More likely *not* to drink tap water at all (42% versus 10% of those who do not drink bottled water at home and 24% of the general public).

In addition, bottled water drinkers are more likely to take action to protect their tap water, compared to non-bottled water drinkers. For instance, bottled water drinkers are:

- More likely to reduce their use of pesticides (82% versus 71%).
- More willing to pay a higher water bill to upgrade a water treatment plant (56% versus 45%).
- More likely to volunteer for a water pollution prevention project (64% versus 50%).

Special Information Needs of Well Owners

Approximately 19% of those surveyed get their water from private wells, meaning their homes are not connected to public drinking suppliers. Private well owners have many unique characteristics and pose particular challenges to public and private leaders attempting to make sure these residents' water is safe for consumption. As a group, more than half of well owners live in rural areas, and, while their incomes are about the same level as those who get water from public supplies, they tend to be somewhat less educated and to be somewhat older.

The environmental attitudes of well owners also differ somewhat from water company customers. While they are just as likely to choose the environment over the economy (68% versus 71%), they are somewhat less likely to think the economy and the environment can go hand-in-hand (51% for well owners and 65% for water company customers).

With regard to the environment overall, well owners favor less regulation and are less supportive of the government than water company customers and the American public in general. For example, 26% of well owners think that government regulation of the environment has gone too far, while just 14% of water company customers have that view. At the same time, 34% of well owners agree that regulation of the environment should go further, while 51% of water company customers agree. There are similar differences in well owner viewpoints on the issues of regulation of air and water pollution, endangered species, wetlands, and wild areas. Well owners are similar to water company customers in agreement that the next 10 years are the nation's last chance to avoid a major environmental catastrophe (60% versus 56%).

While it is no surprise that fewer well owners drink bottled water, they and water company customers are equally likely not to drink water from the tap (23% and 24% respectively). However, a somewhat larger percentage (at 13%), of well owners do not cook with tap water (as compared to 7% of water company customers). Importantly, concern about tap water is almost as high among well owners (71%) as it is among water company and utility customers (78%). Thus, it is important to consider the special needs of well owners when informing the public about water quality.

A majority of well owners (54%) say they "always" read information on the quality of their tap water when it is available, compared to 37% of water company customers. Well owners are more satisfied (62%) than water company customers (55%) with the information they get about tap water quality and safety. However, they are less likely to say they receive information about tap water quality and safety from the media (41% versus 67%).

Conclusion

The 1998 NEETF/Roper water survey reveals many important findings. Notably, even though Americans basically believe their tap water is safe, they are showing increasing signs of caution. Three out of four Americans express "concern" about the quality of their water, and one out of four says he or she does not drink water from the tap, despite public efforts to treat raw water and keep it safe for consumption. But this does not mean there are major problems with America's tap water or that the public is ready to push the panic button. In this survey it appears that "concern" falls somewhat short of actual worry. Indeed, some 91% of adults consume tap water in the home either by using it to cook or by drinking the water.

The survey also finds that Americans want more information than they currently receive about the quality of their drinking water and that they seek such information from many sources. It is clear that the media plays a very strong role in providing public information about water as do environmental groups and government sources. It is also clear that in places where water companies and other water suppliers provide annual updates on the content and quality of the tap water, the public is affected. In the West, for example, water companies are seen as a major source of information about water. In the West (e.g., California), water companies regularly provide tap water information.

While Americans want information on drinking water, the primary sources of tap water information—the media, government agencies, and water companies—are considered less believable than environmental, other public interest groups, doctors, or health care providers. And, some of the more credible sources (notably doctors and other health care professionals) are perhaps less knowledgeable about tap water quality and safety. There is evidence that some people are making the health/water connection, since health care professionals are the most trusted source of information on tap water safety. Parents are even more likely to look to health care providers for information than other adults showing that children's health is a factor in views of and concerns about tap water safety.

Fortunately, many Americans know that clean and safe drinking water is a national priority. There appears to be a fair amount of awareness of local threats to water quality, but there is considerable doubt that people actually know the exact source of their drinking water. And a majority of Americans express a willingness to work to preserve water for future generations.

Methodology

Description of the Sample

A nationwide cross-section of 2,000 adults, 18 years of age and older, was interviewed for The National Environmental Education & Training Foundation's National Report Card on Environmental Knowledge, Attitudes and Behaviors survey. There were two versions of the survey: a myth section and a tap water section. Each was based on half a sample (1,000 interviews). Interviews were conducted by telephone from April 29 to May 17, 1998. Results are projectable to the total adult population of the continental United States who would be willing to be interviewed in a telephone study of this kind.

The margin of error due to sampling is plus or minus two percentage points at the .95 confidence level for the full sample of 2,000 interviews (it is plus or minus three percentage points for half the sample with 1,000 interviews). It is larger for the results for smaller subgroups of the public. For example, the sampling error is plus or minus four percentage points for results among the 667 adults in the sample aged 18 to 34. When comparing results of the full 1998 study (2,000 interviews) to earlier waves of this study (known as the Times Mirror Magazines National Environmental Forum from 1992 to 1995), the margin of sampling error is plus or minus three percentage points.

Sampling Method

The basic sample was drawn at random from the adult population of the continental United States, excluding institutionalized segments of the public (such as those in Army camps, nursing homes, and prisons). Households contacted for the survey were selected at random by a procedure known as random digit dialing, which insures that households with unlisted telephone numbers, as well as those with listed numbers, are included in the sample.

All interviews were conducted during evening hours on weekdays and all day on weekends to ensure that both working as well as non-working segments of the population would be included.

Weighting Procedure

The demographic characteristics of the random sample were compared with the most recent Census Bureau estimates and corrective weights were applied to ensure proper representation based on age, sex and educational attainment.

Percentages Not Totaling 100%

Responses were computerized and rounded off to the nearest whole percentage. As a result, percentages in certain charts and columns may sometimes total slightly more or less than 100%. Also, in certain charts and analyses, the results of those who said "don't know" or chose not to answer may have been omitted.

Appendix: Survey Questions and Results

Introduction

Hello. I'm _____ from the Roper Poll, and we're conducting an important survey today about the environment. This is a research study; we are not selling anything, and all answers will be kept confidential. For this interview, may I please speak to the youngest adult male, who is at least 18, who lives there and is home? (If no male available) Then may I speak to the oldest adult female, who is at least 18, who lives there and is home?

Questions **% of Respondents Answered**

1. Most of the time, do you think environmental protection and economic development can go hand in hand, or that we must choose between environmental protection and economic development?

Can go hand-in-hand	62%
Must choose between environment and development	28%
Depends (volunteer)	4%
Don't know	7%

2. When it is impossible to find a reasonable compromise between economic development and environmental protection, which do you usually believe is more important: economic development or environmental protection?

Economic development	17%
Environmental protection	71%
Depends (volunteer)	8%
Don't know	4%

3. There are differing opinions about how far we've gone with environmental protection laws and regulations. At the present time, do you think environmental protection laws and regulations have gone too far, not far enough, or have struck the right balance?

Gone too far……	17%
Not far enough……	46%
Struck about the right balance……	29%
Don't know……	8%

4. Thinking now about some specific areas, at the present time, do you think laws and regulations for (read item below) have gone too far, not far enough, or have struck about the right balance?

(Rotate options—Gone, Not, Struck, Don't—top to bottom, bottom to top)

	Too far	Far enough	Balance	Don't know
Fighting air pollution…….	9%	61%	26%	4%
Protecting wild/natural areas…….	11%	50%	35%	4%
Protecting endangered species of plants, animals and insects……	18%	44%	34%	4%
Protecting wetland areas…….……..	12%	46%	31%	12%
Fighting water pollution……	5%	72%	19%	4%

5. Please tell me whether you strongly agree, mostly agree, mostly disagree, or strongly disagree with the following statement: The next ten years are the last decade when humans will have a chance to save the earth from environmental catastrophe.

Strongly agree…….	21%
Mostly agree……	36%
Mostly disagree……	23%
Strongly disagree…….	15%
Don't know……..	5%

6. In general, how much do you feel you yourself know about environmental issues and problems? Would you say you know a lot, a fair amount, only a little, or practically nothing?

A lot…….	10%
A fair amount……..	58%
Only a little…….	27%
Practically nothing……..	5%
Don't know…….	*

The next group of questions are about tap water in your household, that is the water from the sinks and faucets in your home. If you don't know the answer to any question, please just tell me that you don't know.

7. Which of the following statements describes your household:

We have our own well for tap water, or……..	19%
We get our tap water from a public or private water company……...	75%
Don't know…….	5%

8. Where does the water company get the water it delivers to your home? Is it from:

A well or groundwater……	17%
A lake or reservoir……..	39%
A river, or……	16%
The ocean……	1%
Don't know…….	26%

9. How confident are you that your answer to this question is correct? Are you:

Very confident…….	63%
Somewhat confident……	29%
Not too confident, or……...	6%
Not confident at all……..	1%
Don't know…….	*

10. Are you the person in the household who opens the water bill?

Yes……..	62%
No……...	27%
Don't get a water bill……..	11%

11. From which of the following sources do you receive information about the quality and safety of your household's tap water? Do you get water information from:

	Yes	No	Don't know	
The water company…….	34%	60%	6%	
Television, radio, newspaper, or magazines.……	61%	37%	3%	
City or county government……..	39%	57%	4%	
Doctor or other health care provider……	14%	83%	3%	
Environmental or other public interest groups…….		31%	65%	.4%
State or federal government…….	23%	72%	5%	

12. Do you always, sometimes, rarely, or never read the information you receive about the quality and safety of your tap water?

Always…….	39%
Sometimes……	34%
Rarely……...	10%
Never……	13%
Don't know……..	3%

13. Overall, would you say you are very concerned, moderately concerned, not too concerned, or not concerned at all about the quality and safety of your tap water?

Very concerned	38%
Moderately concerned	38%
Not too concerned	16%
Not concerned at all	7%
Don't know	*

14. How satisfied are you with the current amount of information that you receive about the quality and safety of your tap water? Would you say you are:

Very satisfied	17%
Moderately satisfied	41%
Not too satisfied	22%
Not satisfied at all	18%
Don't know	3%

15. Please tell me whether each of the following statements describe your household or not:

	Yes describes	No, does not describe	Don't know
We drink tap water	75%	24%	*
We cook with tap water	91%	9%	*
We boil our water before drinking it	9%	90%	*
We use a filtering or distilling device before we drink tap water	32%	67%	1%
We drink bottled water at home	46%	54%	*

16. Which of the following statements, if any, describe your reasons for boiling, filtering, distilling, or using bottled water. Is it for:

	Yes	No	Don't know
Convenience……	41%	57%	1%
The taste, smell, or color of tap water…….	69%	29%	1%
Stories in the news about water pollution…..	49%	50%	1%
Doctor or other health care provider recommended it…….	14%	85%	1%
Concerns about your water company or……	33%	66%	1%
Some other reason (Please Specify)…….	35%	63%	2%

➘(Specified)

Safety...6%
Health...4%

17. There are many source of information about water quality and safety. For each of the following sources, please tell me the extent to which you would believe the information it gives you about the quality and safety of your household's tap water:

	Very believable	Mostly believable	Not too believable	Not at all believable	Don't know
Your water company……	17%	41%	15%	9%	19%
Your city/county government……..	14%	46%	20%	9%	11%
State/fed government……...	13%	43%	23%	10%	11%
Television, radio, newspaper, magazine……...	14%	51%	22%	7%	6%
Your doctor or other health care provider…….	33%	36%	5%	6%	20%
Environmental or other public interest groups……..	19%	53%	13%	6%	9%

18. Which one of the following sources of pollution do you think is the biggest threat to the quality and safety of drinking water in your community? Is it:

Community sewage treatment plants and septic tanks	19%
Waste dumped by factories	22%
Surface water running off yards and city streets	16%
Farm chemicals and livestock waste	20%
Construction and land development	11%
None of the above (volunteered)	3%
Don't know	9%

19. How confident are you that your answer to this question is correct? Are you:

Very confident	41%
Somewhat confident	45%
Not too confident	10%
Not confident at all	3%
Don't know	1%

20. Now, please tell me whether you would be very willing, moderately willing, not too willing, or not willing at all to engage in the following activities to protect your source of drinking water.

	Very willing	Moderately willing	Not too willing	Not willing at all	Don't know
Reduce your use of fertilizers and pesticides	48%	29%	6%	11%	7%
Pay a higher water bill to upgrade the water treatment plant	19%	32%	17%	25%	8%
Attend an educational program on water conservation and pollution prevention	24%	37%	19%	19%	2%
Work with your community to set aside more land to protect water from pollution	27%	40%	14%	16%	3%
Volunteer for community projects that prevent water pollution	18%	38%	21%	21%	1%
Write letters calling for increased environmental regulations	18%	33%	24%	24%	2%

22. Now I would like to ask you about some of the things you may do in your day-to-day life. For each of the following things, would you please tell me whether you never do it, sometimes do it or frequently do it. (First/Next...)

	Never	Sometimes	Frequently	Don't know
Recycle things like newspapers, cans, and glass……	13%	21%	65%	*
Avoid using chemicals in your yard or garden……..	32%	27%	39%	2%
Buy biodegradable or recyclable products……	8%	40%	50%	2%
Conserve water in your home and yard……	11%	28%	61%	*
Turn off lights and electrical appliances when not in use……...	3%	12%	85%	*
Try to cut down on the amount of trash you create…….	8%	29%	62%	1%
Use other types of transportation, such as biking or the bus, instead of driving your car……	60%	23%	16%	1%
Make an environmental presentation to a school or community group…….……	82%	12%	5%	1%
Participate in a public land clean-up day…….……	58%	34%	8%	*
Help a group improve fish or wildlife habitat…….……	70%	20%	9%	1%
Do other volunteer work for a group that helps the environment…….……	64%	28%	8%	1%

22. Finally, I am going to ask you about some different activities and hobbies that people can engage in. For each one, would you please tell me if you have done it in the past twelve months or not?

	Yes	No	Don't know
Gone fishing……	38%	62%	*
Gone swimming outdoors…… .	53%	47%	*
Gone hunting……..	14%	86%	*
Gone motor boating…….....	26%	74%	*
Gone downhill skiing…….	9%	91%	*
Played golf…….	20%	80%	*
Gone hiking……	50%	50%	*
Gone bicycling……...	48%	52%	*
Gone running or jogging……	46%	54%	*

* Response given by less than .05%.