

# CASE

## Safe Drinking Water Regulations

### Challenge:

Disinfection of drinking water to reduce widespread microbial risk is one of the most important public health accomplishments in over 100 years. But there is growing evidence that the disinfectants used to kill naturally occurring pathogens in source water can break down into by-products that are carcinogenic or have harmful non-cancer health impacts.

### Result:

EPA reached out to a wide variety of stakeholders to engage them in developing regulations to reduce risk from disinfection by-products while simultaneously taking steps to maintain and improve existing microbial protection – thus avoiding a potential risk/risk tradeoff. Since 1992, through three separate federal advisory committees mediated by RESOLVE, the parties negotiated a set of regulations, modifying the Surface Water Treatment Rule, expanding and strengthening disinfection by-products rules, and launching an Information Collection Rule to inform future discussions. Implementation of these new regulations will help provide the public with safer drinking water.

## Participants

All Indian Pueblo Council, Pueblo Office of Environmental Protection  
American Water Works Association  
Association of Metropolitan Water Agencies  
Association of State Drinking Water Administrators  
Association of State and Territorial Drinking Water Administrators  
Association of State and Territorial Health Officials  
Center for Neighborhood Technology  
Clean Water Action  
Chlorine Chemistry Council  
Conservation Law Foundation  
Environmental Council of the States  
Environmental Defense Fund  
International Ozone Association  
National Association of People with AIDS  
National Association of County and City Health Officials

National Association of Regulatory Utility Commissioners  
National Association of State Utility Consumer Advocates  
National Association of Water Companies  
National Consumer Law Center  
National Environmental Health Association  
National League of Cities  
National Rural Water Association  
National Water Resources Association  
Natural Resources Defense Council  
Physicians for Social Responsibility  
Portland Water Bureau  
Unfiltered Systems  
U.S. Environmental Protection Agency  
Water and Wastewater Equipment Manufacturers Association

### MEDIATORS

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## Issues

Disinfection of drinking water to reduce wide-spread microbial risk is one of the most important public health accomplishments in over 100 years. Treatment of drinking water has protected millions of people from water-borne diseases. Evidence has emerged over the past few decades, however, that the disinfectants used to kill naturally occurring pathogens in source water can break down into unintended by-products. The problem is that some of these by-products are suggested human carcinogens or have harmful non-cancer health impacts.

Over 250 million people in the United States drink water disinfected to reduce microbial risk. Thus, the challenge is to find a

way to simultaneously maintain and improve existing microbial protections while reducing the risks that may be associated with this positive public health measure – thus avoiding a potential risk/risk tradeoff. Doing this even as the science outlining and quantifying these risks is still emerging poses an even greater challenge.

In 1996, Congress amended the Safe Drinking Water Act (SDWA) to improve the protection, treatment, distribution system integrity, and public information about drinking water sources. In doing so, Congress established deadlines for new Microbial and Disinfection By-Products rules.

## Process

In 1992, ahead of the debate in Congress, the U.S. Environmental Protection Agency's (EPA) Office of Ground Water and Drinking Water had already begun a unique, multi-year, multi-step process of joint inquiry, unprecedented data gathering and analysis, and negotiation. Working with EPA, RESOLVE mediators convened and facilitated three separate federal advisory committees over an eight-year period. The parties to these negotiations represented the major interests in the provision of safe drinking water in the United States: the water supply community, public health officials, public interest groups, chemical and equipment suppliers, and local, state and federal regulators.

The first negotiation resulted in an agreement on a trio of regulations and a staged approach, relying on the ability to engage in a process of joint inquiry and problem-solving negotiations that the interested parties developed in the first round of negotiations and that they continued to use to work through issues of ongoing scientific uncertainty. In Stage I, the parties agreed on revisions to the Surface Water Treatment Rule. They also expanded and strengthened disinfection by-products rules, with a standard for protection more restrictive than in the past that

could be reconsidered once more data was gathered. The parties also agreed on a massive Information Collection Rule and enhancements to the research programs both at EPA and the American Water Works Research Foundation, with the intent that this new information would inform Stage II negotiations. As an indication of the parties' commitment to collaborative problem solving, EPA convened a second, unanticipated, expedited negotiated rulemaking to modify some aspects of the Stage I rules, when new information raised questions about a key assumption in the first round.

In 1998, EPA reconvened the parties for the Stage II negotiations as a third negotiated rulemaking process, drawing on input from new health research and the information gathered as part of the round one agreement, as well as a series of public stakeholder involvement meetings and technical workshops, plus review of data gathered pursuant to the initial regulations. In September 2000, the parties reached agreement on the Stage II regulations to further strengthen public health protections both from microbial risks and disinfection by-products.

## Results

Tap water in the U.S. is arguably safer because of the structured negotiated rulemaking process used by the EPA. The sometimes-contentious negotiations resulted in new regulations that are expected to shape most of the investments in public water systems in the United States for the next 20 years and will reduce health risks significantly. These regulations were supported by a broad spectrum of stakeholders – including the regulated industry, environmental and public health advocates – and informed by their collective judgment and experience about the desirability, practicality and technical efficacy of various policy options.

Highlights include agreed-upon requirements that water utilities will conduct individual filter monitoring, which will enable them to detect pathogen risks with much greater sensitivity. Also, the parties began a thoughtful dialogue on issues concerning potential risks of birth defects from short-term exposures to disinfection by-products, which are at once highly complex, uncertain and charged with natural human emotions.

Scientific/Technical Obstacles and Actions	
OBSTACLE	ACTION
Not enough data — on toxicology and exposure and on utility practices	Make regulatory decisions in stages and jointly design a multimillion-dollar information-collection process
Potential for disputes over predicted costs of different regulatory options based on who provides the cost data	Form a technical work group representing all parties to review data, design analytical models together and present areas of agreement and disagreement jointly to the negotiating group
Solving the problem required the information and expertise of experts from widely differing disciplines	Hold a workshop for parties and their technical experts to establish a common understanding of terms and key issues. Mutually agree upon agenda and speakers. Use interactive panels when parties rely on experts with competing conclusions