

Background on The Affordability Criterion Under the Safe Drinking Water Act



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The Health Threat

- 1965 – 18,000 residents of Riverside, CA, infected
 - 1968 – 750 residents of Angola, NY, gastroenteritis
 - 1974 – 5,000 residents of Rome NY, giardiasis
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1970 US PHS Survey

- 16% of all systems violated mandatory limits
- 25% of systems serving 500 or fewer violated limits
- 60% of small systems had major engineering faults
- 99% of small systems violated monitoring standards

The Regulatory Challenge

Water Systems Subject to Regulation under SDWA

- 1974 – 19,236
- 1977 – 34,631
- 1979 – 180,000
 - 58,768 community water systems
 - 39,253 served fewer than 500 residents
 - **21,585 served fewer than 100 residents**

Small System Regulatory Costs

- New York small water system serving 950 people would be required to expend \$675,000 to comply with the rules, a cost of more than **\$20,000 per family**.
- Mr. Kazen “the problem is financial. . . . Regardless of what we say about exemptions, somewhere down the line within the next 7 years we are going to be faced with this problem.”

The Statutory Solution

Variations

Using the most effective treatment method, the water system still could not meet the drinking water standard (Maximum Contaminant Level or MCL)

despite all reasonable technological, economic and legal efforts to do so.

The 1974 Variance Problem

- The variance would be granted only if the system could not meet the intake requirements and could not meet an MCL, despite all reasonable technological, economic and legal efforts to do so.
- Intake requirements was an intractable problem requiring subjective decisions **not tetherable to firm science or existing science policies**

The 1986 Solution

- Uncouple variance from intake water quality, essentially
- Provide authority to EPA to specify
- **“Best available technology”**
- Could vary **depending on the number of persons served by the system**
- Or for other physical conditions related to **engineering feasibility and costs of compliance**
- “As considered appropriate by the Administrator.

The 1986 Fatal Conceit

It was politically untenable to admit publicly that some citizens would be exposed to unsafe drinking water.

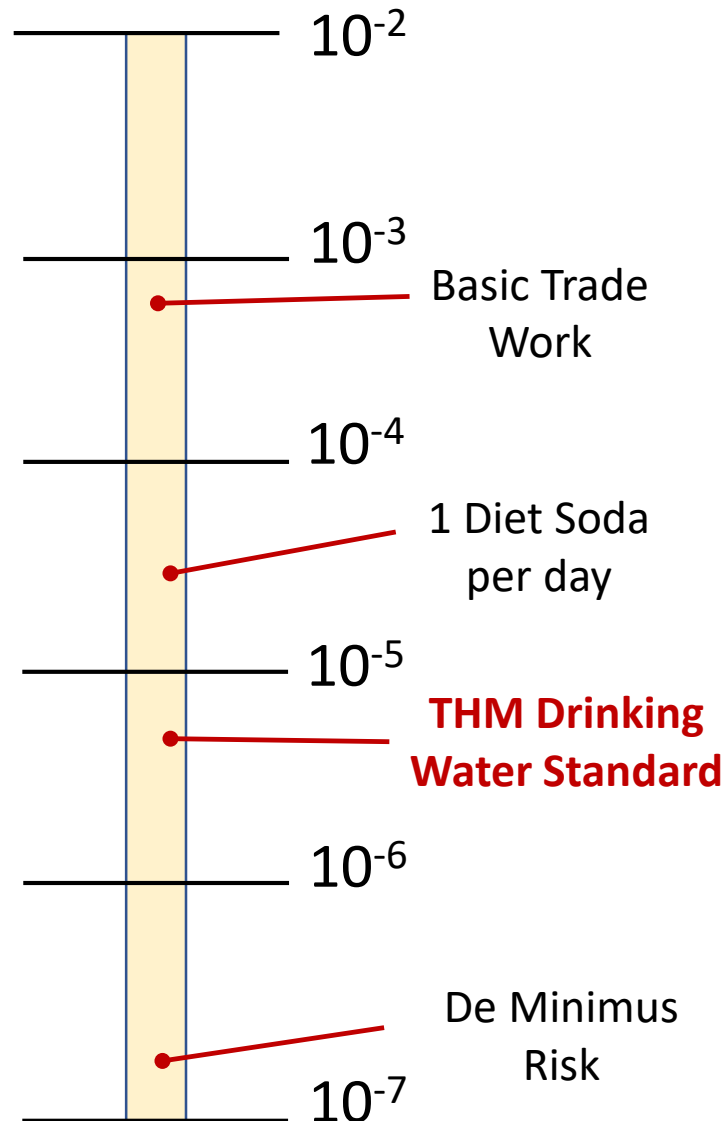
The 1996 Fix

- Required EPA to define “variance technologies” for small systems that “after examination for efficacy under field conditions, are available and **affordable**.”

Affordability

- Based on system size.
- The government would replace the family's choice of how to spend their money .
- This was NOT a balancing of benefits and costs.
- The presumption was that the benefit was essential to provide, but only if it was affordable.

Individual Annual Risk



THM Population Risk Years per Case

System Size	Years per case
25-99	3,508
100-499	780
500-999	253
1,000-2,499	117
2,500-4,999	50
5,000-9,999	29

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Annual Family Cost

System Size	\$1978
25-99	\$265
100-499	\$181
500-999	\$173
1,000-2,499	\$163
2,500-4,999	\$159
5,000-9,999	\$143

1973 Family Expenditures

\$8,348 Food, Clothing, housing, taxes

\$784 Auto purchase

\$750 Auto expenses

\$708 Recreation

\$693 Health Care

\$508 Charitable donations

\$285 VCR purchase

\$194 2% Median post-tax income

\$180 Water

\$153 Reading and education

If families were willing to buy a VCR, they should be willing to spend 2% of their family income on the safety of their drinking water.

I now leave to others to discuss why this was a fundamentally wrong approach to evaluating affordability.