


5. United States Drinking Water Regulations

Presenter

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United States Drinking Water Regulations

Japan - U.S. Governmental Conference on Drinking Water Quality Management and Wastewater Control

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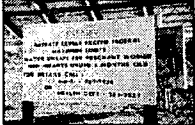
Jennifer McLain
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Background

The Problem -- A Range of Public Health Risks in Drinking Water

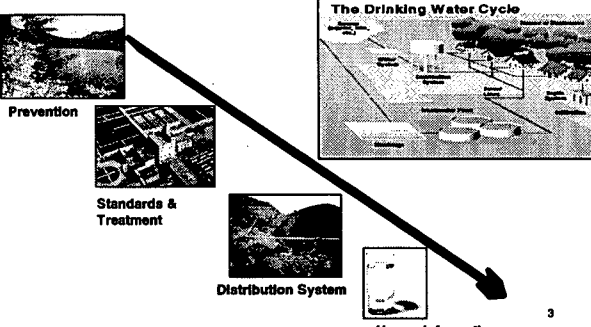
- > **Acute Health Risks** - effects from short term exposure
 - > Bacteria (e.g., *e.coli*)
 - > Viruses (e.g., Hepatitis-B)
 - > Protozoa (e.g., *Cryptosporidium*, *Giardia*)
 - > Chemicals (e.g., nitrate)
- > **Chronic Health Risks** - from long term exposure
 - > Chemicals: metals (e.g., arsenic) synthetic organics (e.g., pesticides), and volatile organics (e.g., benzene)
 - > Disinfectants and byproducts (e.g., chlorine, bromate)
 - > Radiation (e.g., radon)
- > **Risks Come From Multiple Sources**

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Background

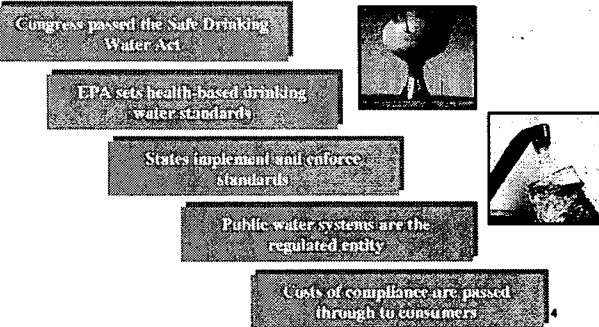
The Solution: Multiple Barrier Approach to Public Health Protection



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Standard Setting

Roles & Responsibilities



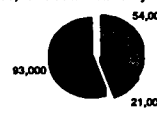
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Background

Public Water Systems

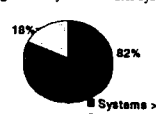
- > **Non-Community Water Systems**
 - > Non Transient -- e.g., some schools, hospitals
 - > Transient -- e.g., highway rest stops, restaurants
- > **Community Water Systems (CWSs)**
 - > Serve year-round residents
 - > Serve 93% of the population
 - > Most of the population receives drinking water from large CWSs yet most water systems are small.

168,000 Public Water Systems



54,000
114,000

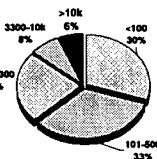
Population served by CWSs



82%
18%

■ Systems >10,000
□ Systems <10,000

Size Distribution of CWSs



>10k 6%
101-500 33%
501-3300 23%
3300-10k 8%
<100 20%

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Background

SDWA 96: A New Approach to Reflect Changing Priorities (SDWA Section 1412)

SDWA Priority Contaminants


- Arsenic
- Radon
- Microbial/Disinfection byproducts
- Radionuclides

Contaminant Candidate Selection

Publish a list of drinking water contaminants every 5 years.

Decide whether to regulate at least 5 contaminants every 5 years

Final regulations within 3 1/2 years after determination

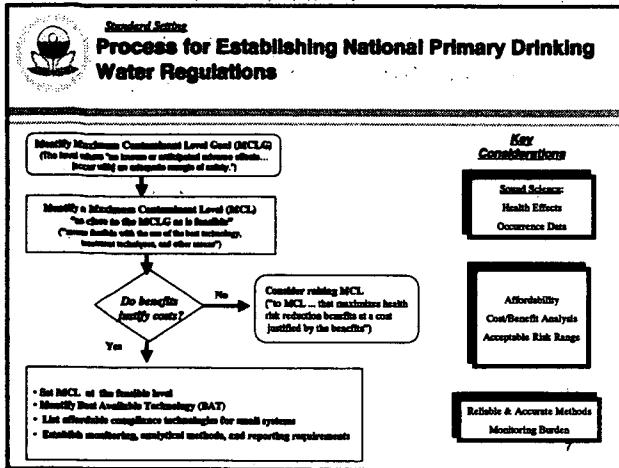


6 Year Review of Existing Regulations

Review and revise existing regulations every 5 years

Revisions shall maintain, or provide for greater protection of public health

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Standard Setting
Research and Data Collection to Support Sound Public Health Decisions

- Quality Information is Critical
 - Health Effects
 - Methods Development
 - Treatment Effectiveness Studies
 - Occurrence Data
- Overall Drinking Water Research
 - Comprehensive Drinking Water Research Strategy under development
 - Drinking Water Research Information Network (DRINK) - database of ongoing research
 - Completing necessary research requires partnership among a variety of institutions, countries and private organizations

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Prevention
Contamination Prevention Programs

- Increased importance of prevention to supplement costly drinking water treatment
- Expanded emphasis on existing prevention programs
- 1996 SDWA source water assessment and prevention provisions
- Greater coordination and integration with other statutes & across Agencies

SDWA

Source Water Assessment & Protection
Underground Injection Control
Other (Wellhead Protection, Sole Source)

Coordination with Other Programs and Agencies

Programs: Clean Water Act programs, Hazardous Waste programs, Pesticides programs

Agencies: Department of the Interior, US Department of Agriculture

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Prevention
Source Water Assessment & Protection Program (SDWA Section 1453)

- Goal: Protect Public Health by *Avoiding Contamination*
- Build on existing programs
- Flexibility to address local problems
- 173,000 assessments for all public water systems must be completed by States by 2003 followed by appropriate management measures
- Six Step Framework
 - Delineation
 - Source Inventory
 - Susceptibility Determination
 - Public Availability
 - Management Measures
 - Contingency Planning

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Future Goals and Challenges

- Safe and affordable drinking water for all Americans
- Decisions based on sound science and risk
- Integrated water supply management
- Effective source water protection
- Well-managed and operated water systems
- Strong public information and outreach

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FOR MORE INFORMATION

- WEBSITE: <http://www.epa.gov/safewater>
- EPA's Safe Drinking Water Hotline: 1-800-426-4791
- U.S. EPA - Office of Ground Water & Drinking Water: 202-564-3750

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