



AMERICAN WATER

America's Drinking Water: Risks and Challenges

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Background

Maintaining the integrity of the distribution system is paramount to delivering safe drinking water

- ◆ 2006 National Academy of Sciences report on *Drinking Water Distribution Systems: Assessing and Reducing Risks* identified distribution system integrity as encompassing
 - Physical integrity
 - Hydraulic integrity
 - Water quality integrity

The premises plumbing challenge

- **Lead**
- ***Legionella, Mycobacterium*, microbial growth**
- **System materials, standards**
- **Premises treatment systems**

Physical Integrity

- **No metrics on infrastructure age, condition assessment**
- **No reporting on infrastructure investment, replacement rates**
- **No reporting on main breaks, service interruptions**
- **Lack of consistency on boil water notices, repair procedures**

Hydraulic Integrity

- **Lack of guidelines for pressure management**
- **Leak detection and control**
- **Leaking sewer lines threaten drinking water safety**
- **Pipelines/tanks sized for peak hour/day, fire flow**

Water Quality Integrity

- **SWTR requirement for “detectable” residual**
- **Lack of quality control for basic tests like chlorine residual measurement**
- **No disinfectant/residual requirement for groundwater systems**
- **Water quality monitoring based on grab samples**

New Solutions!

- **Need for improvements in technical, financial, managerial oversight of CWS**
 - Consolidation/regionalization
 - Alternative investment models
 - Minimum technical and managerial standards
- **Investment in technology and automation**
- **Look holistically at water cycle from source to tap, including reuse, desalination, storm water**