



**American Water Works
Association**

Dedicated to the World's Most Important Resource™

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North America Water Industry

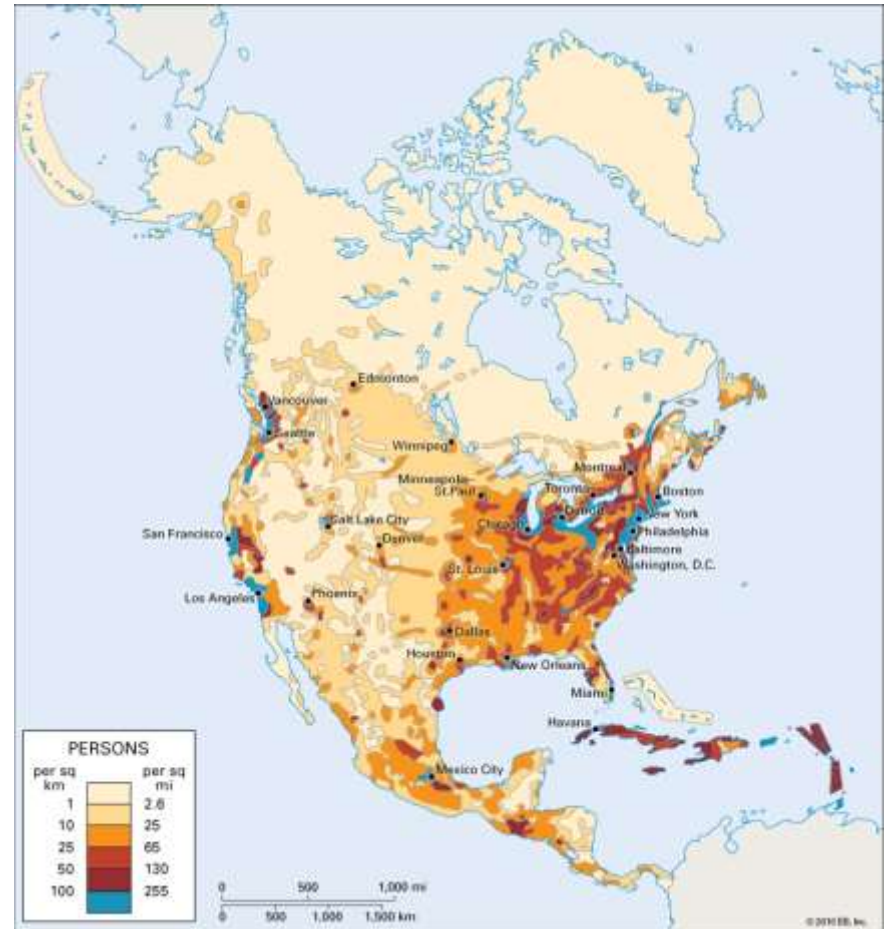
Jim Chaffee, P.E., BCEE
Immediate Past President

International Forum On Water Supply
Japan Water Works Association Annual Conference
October 30, 2014



Overview

- North American “Waterscape”
- AWWA State of Water Industry Survey – Top Issues
- Results
 - Health of the industry
 - Top Issues/Concerns





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North American Waterscape



Water Industry

Utilities providing water services

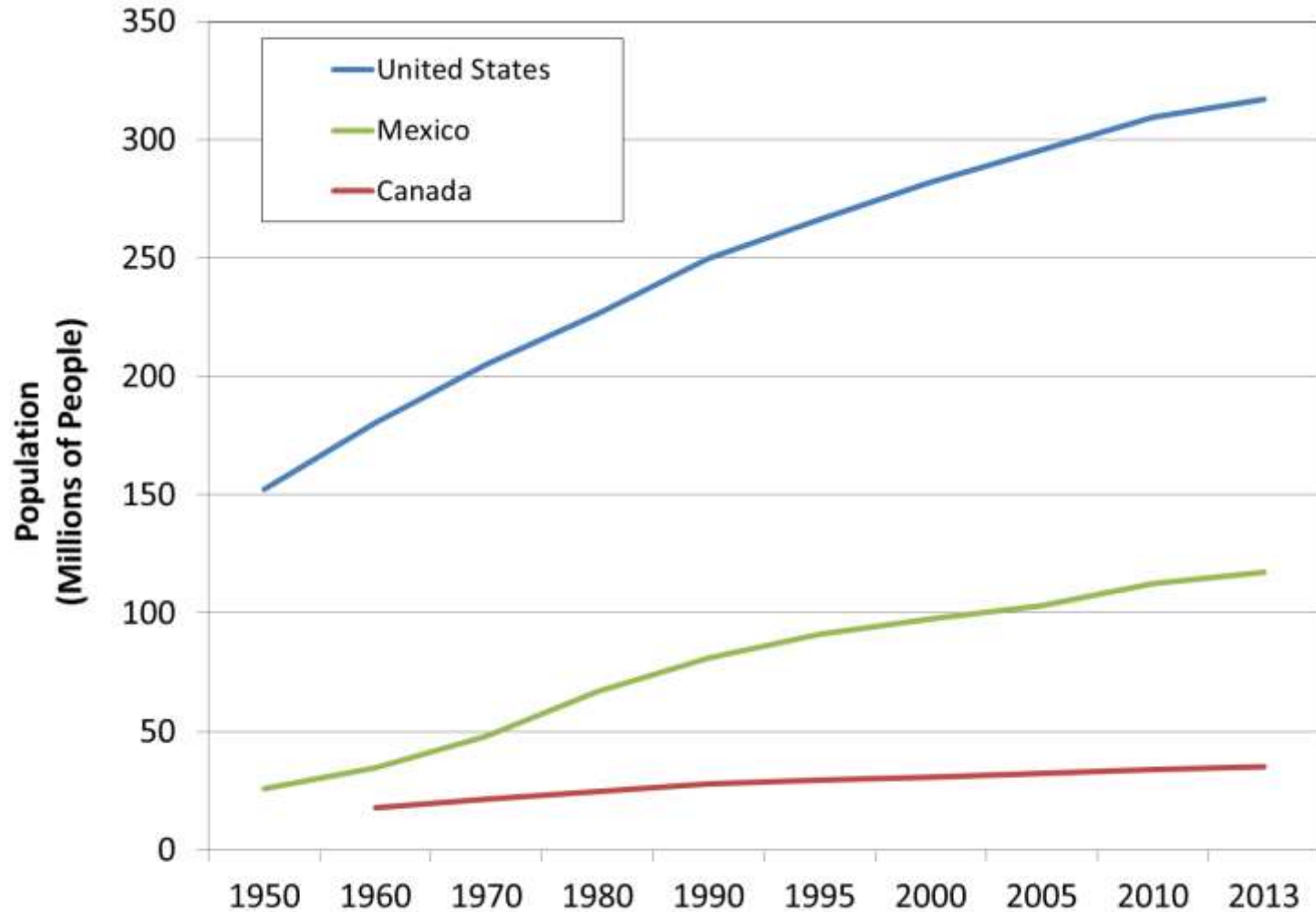
- Potable water
- Wastewater
- Stormwater
- Reuse/Reclamation

Water Industry Values

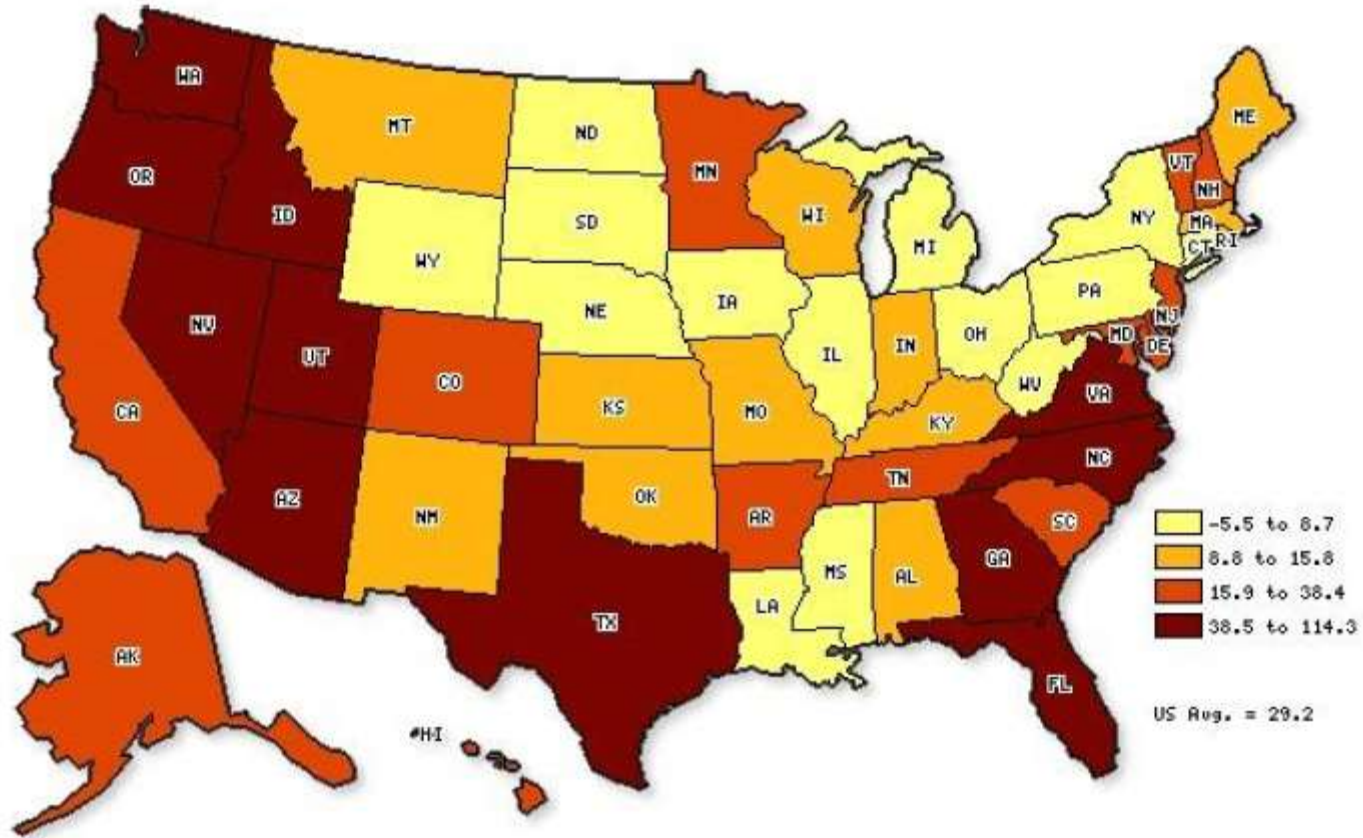
- Safeguard Public Health
- Ensure Community Satisfaction
- Protect the Environment



Population Continues To Increase



Regional Population Growth Trends

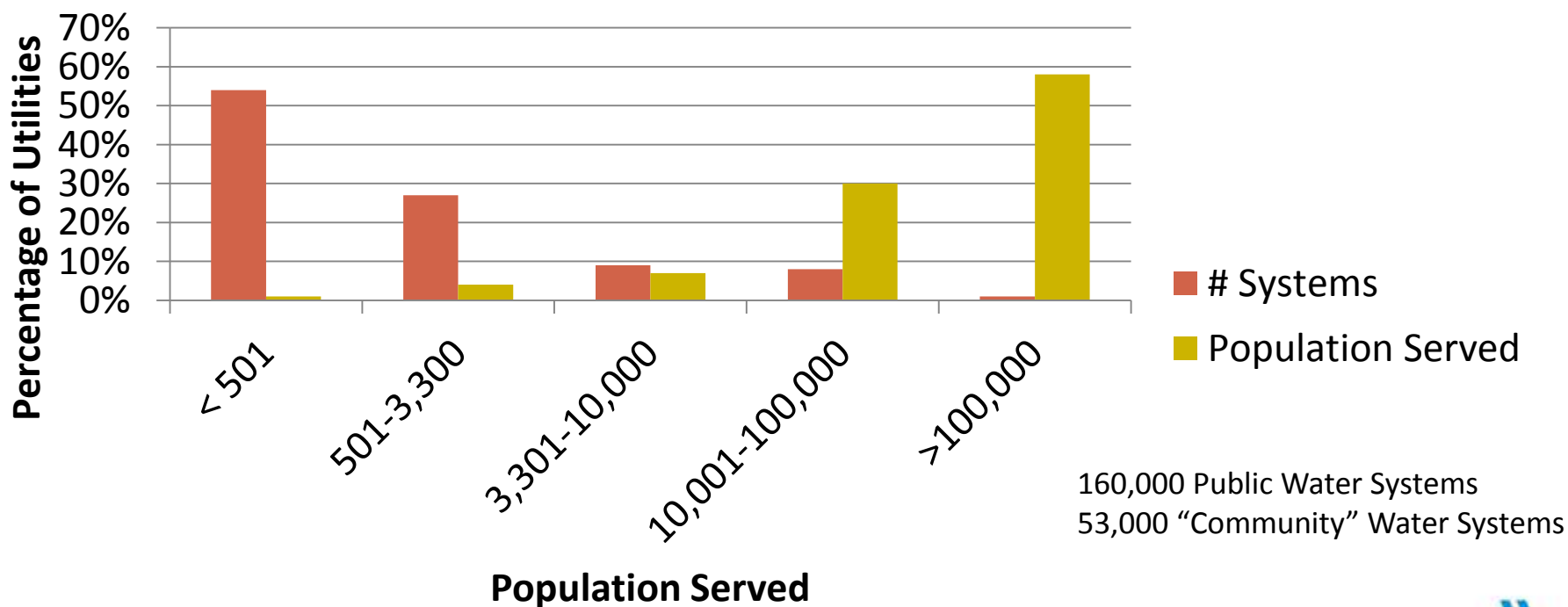


Source: U.S. Census Bureau



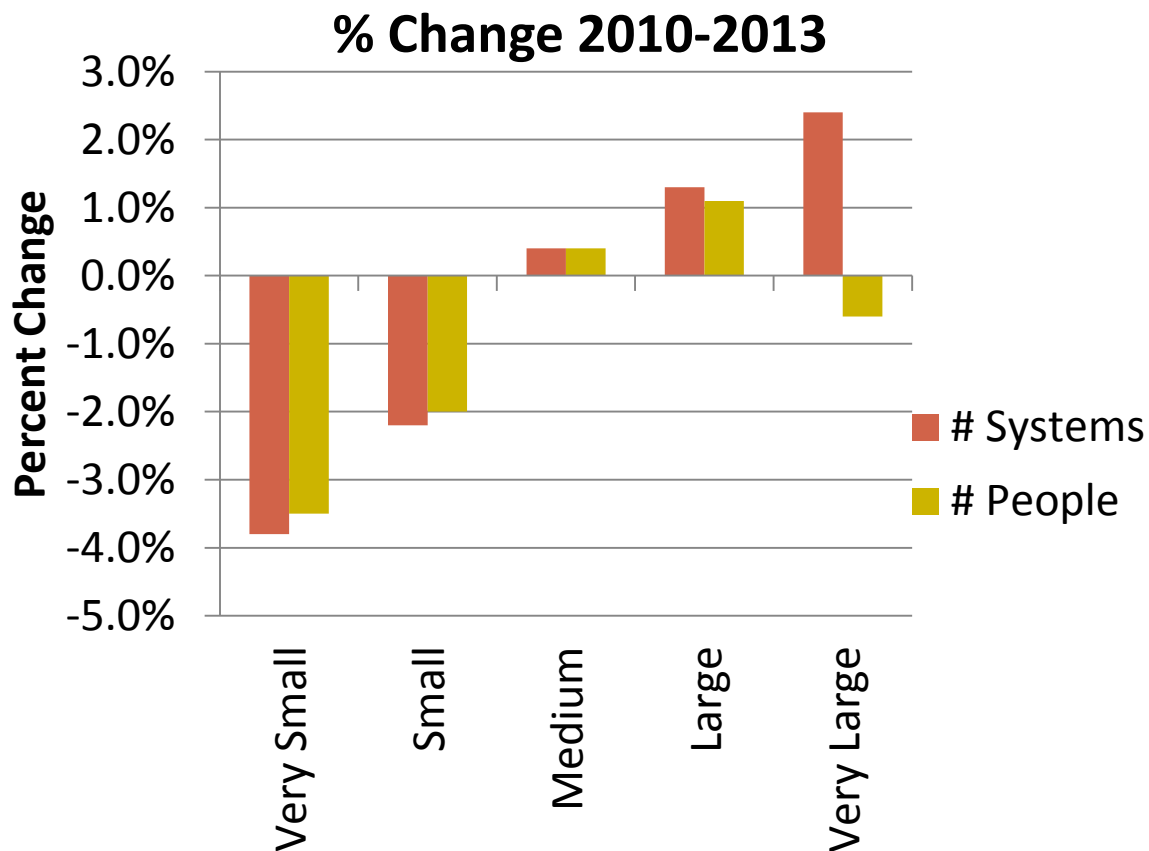
Urbanization

A Small Percentage Of Large Systems Serve Most Of The U.S. Population



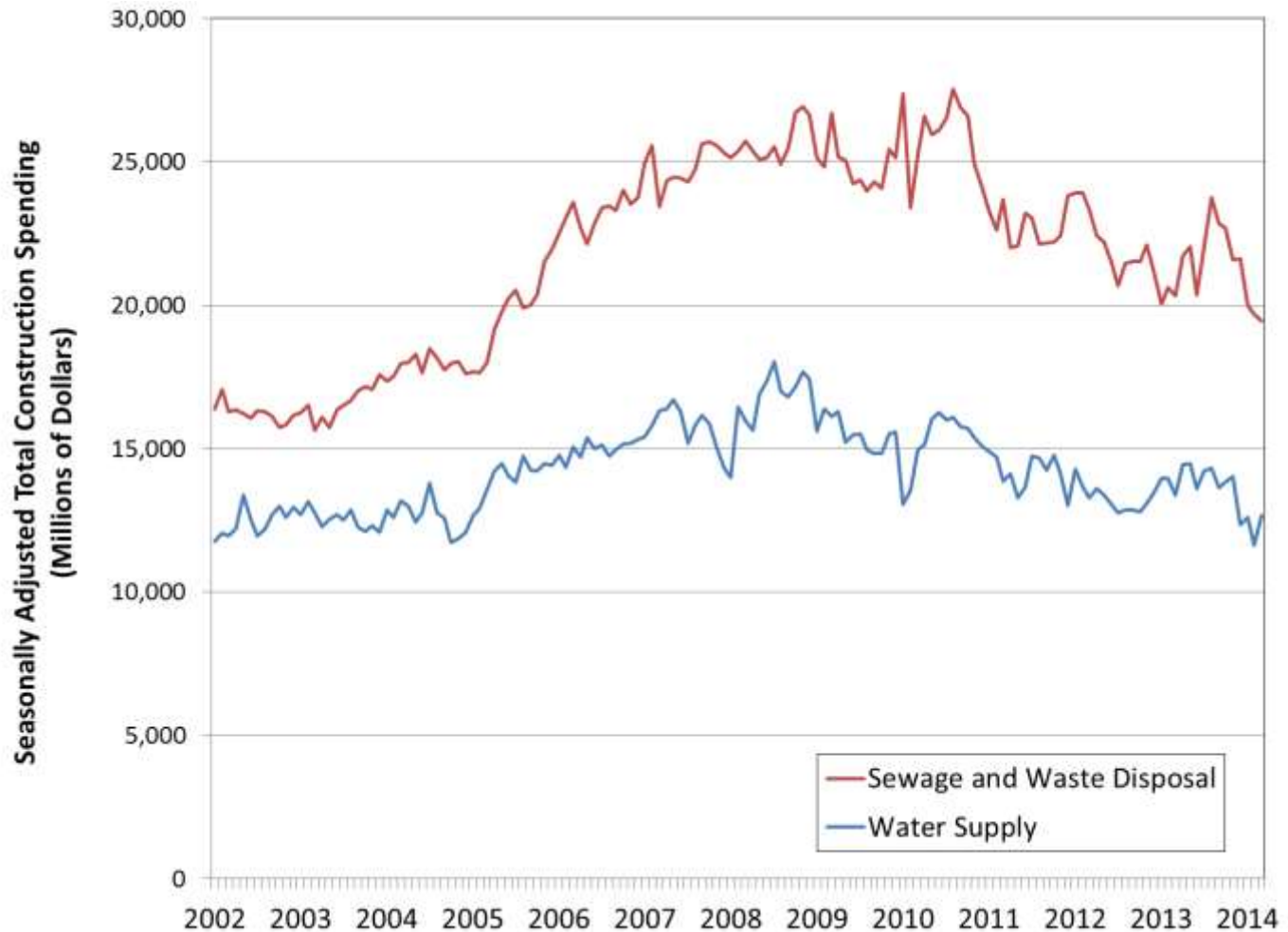
Urbanization

- Number of systems is declining due to consolidation
- Urban populations are increasing



Infrastructure Investments Have Not Returned to Pre-Recession Levels

- Total dollar value of construction work in U.S.
- Seasonally adjusted annual rate

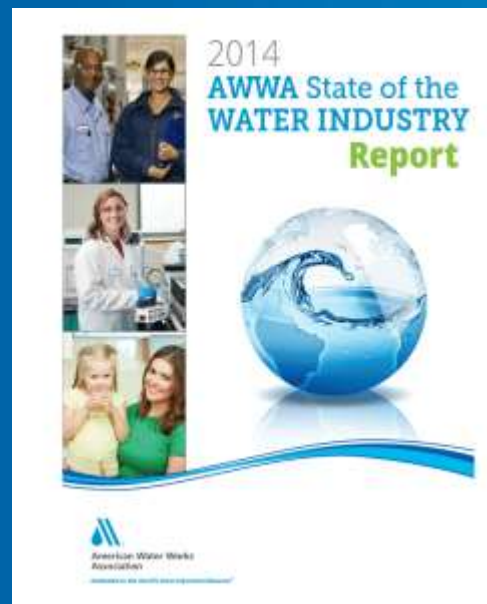




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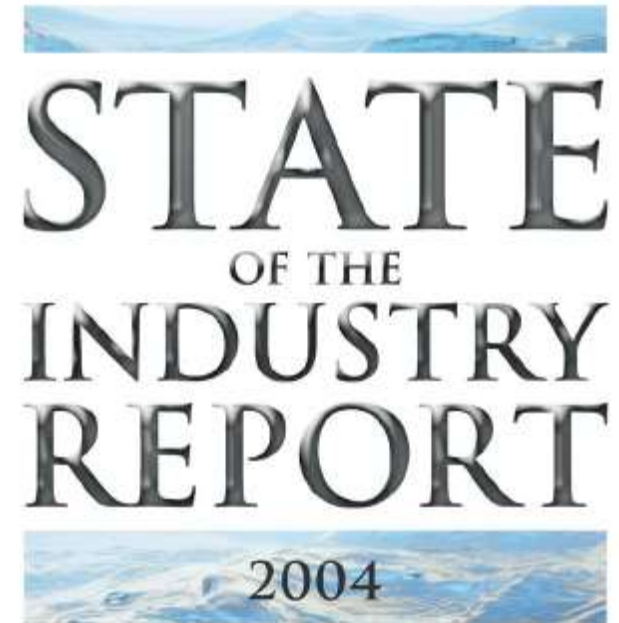
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2014 SOTWI Survey Results



AWWA's State of the Water Industry Survey

- Identifies and tracks significant industry challenges
- Data and results support development of strategies for current/future issues
- Inform decision makers and the public of water industry challenges

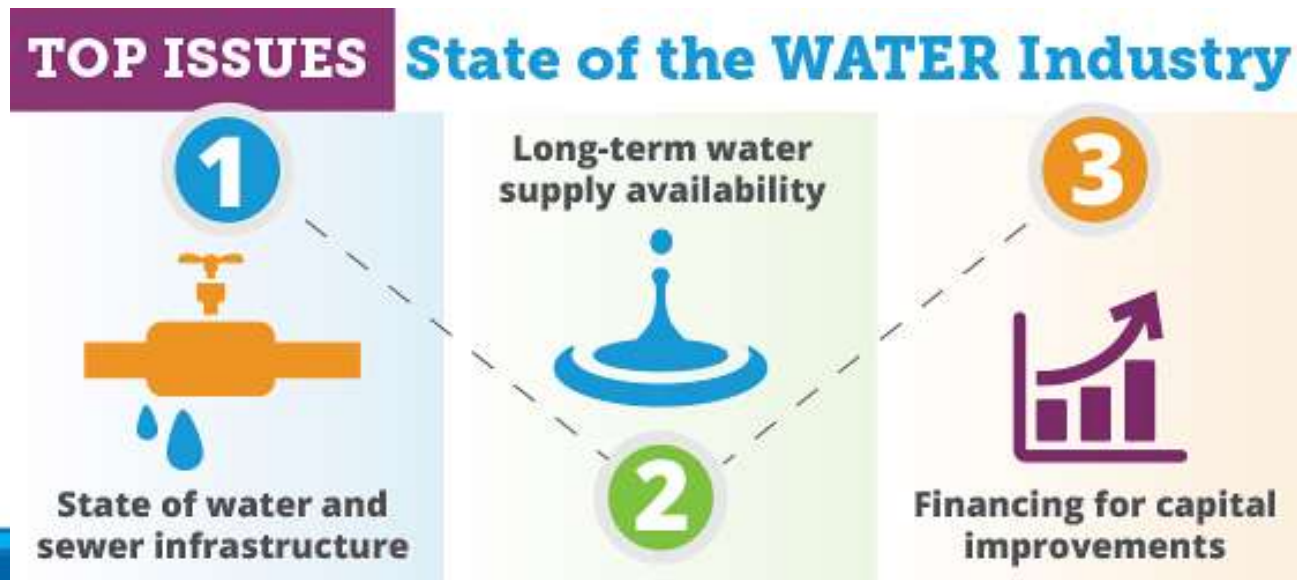


Charting the road ahead
for the drinking water profession



Top Issues

- #1 *State of water and sewer **infrastructure***: 4.57 (63% critical)
- #2 *Long-term water **supply availability***: 4.51 (64% critical)
- #3 ***Financing** for capital improvements*: 4.41 (53% critical)
- #4/5 ***Public understanding** of the value of water resources*: 4.31 (48% critical)/... *value of water systems and services*: 4.27 (44% critical)



State of Water and Sewer Infrastructure

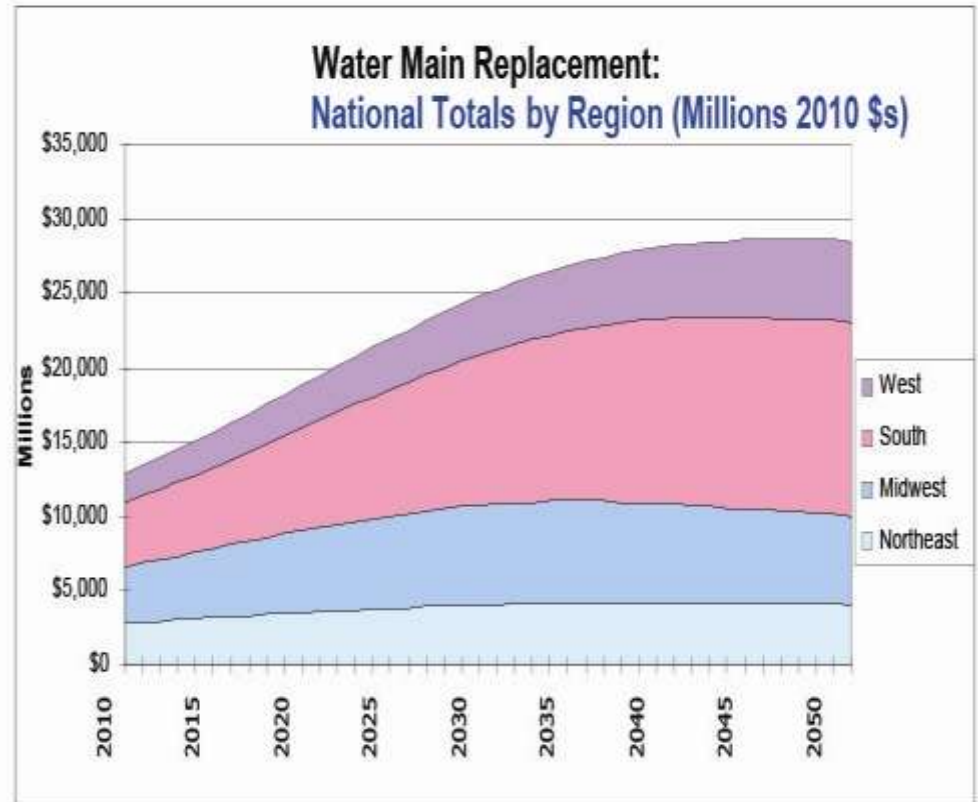
Water and sewer systems built and financed by previous generations are approaching or have exceeded their useful lives

- Revenues do not fully cover costs
- Difficulty in financing
- Public acceptance of rate increases

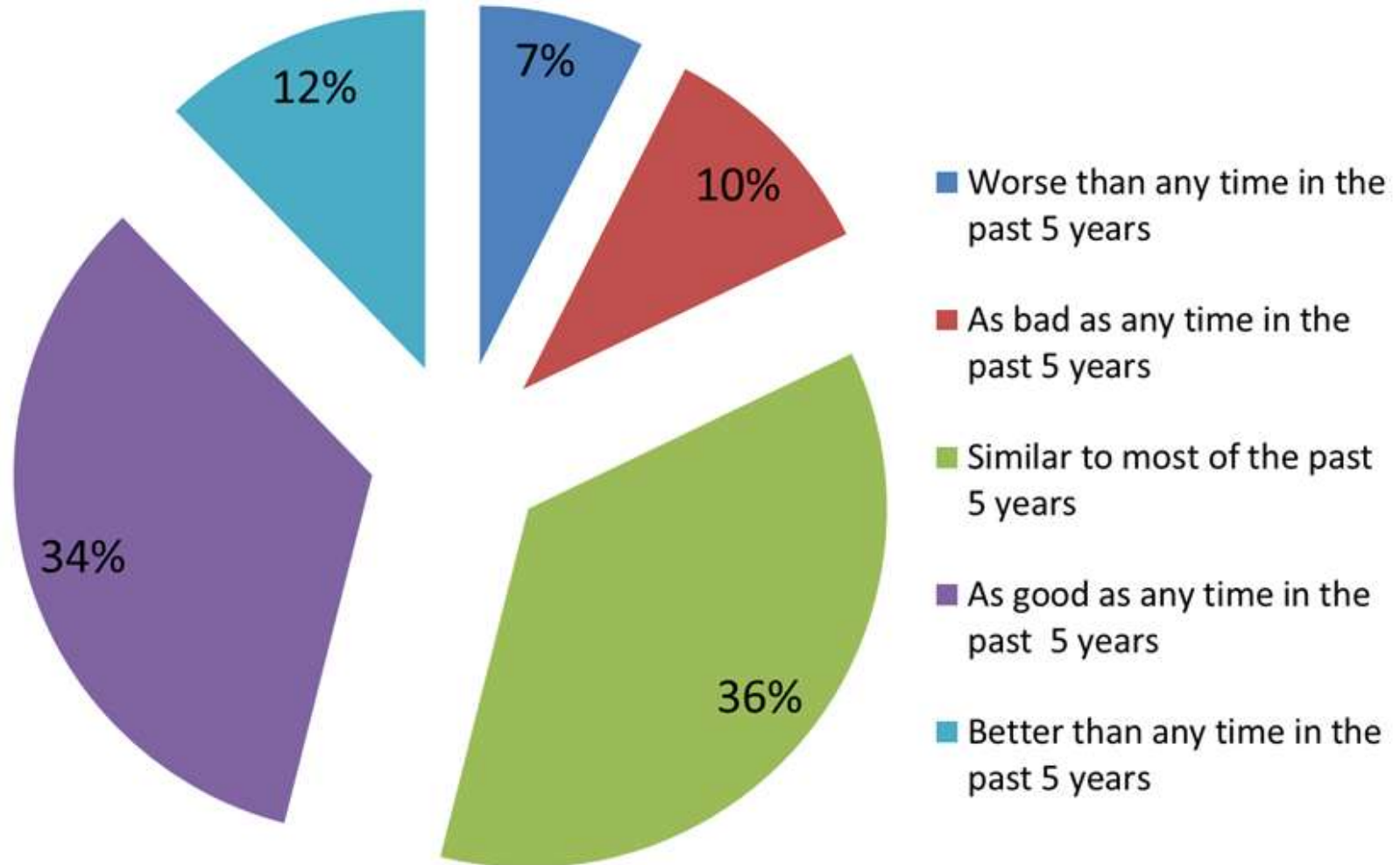


Projections Of Pipe Renewal/Replacement Needs In U.S.

Water and wastewater
systems: \$1 trillion each
over next 25 years



Financing for Capital Improvements

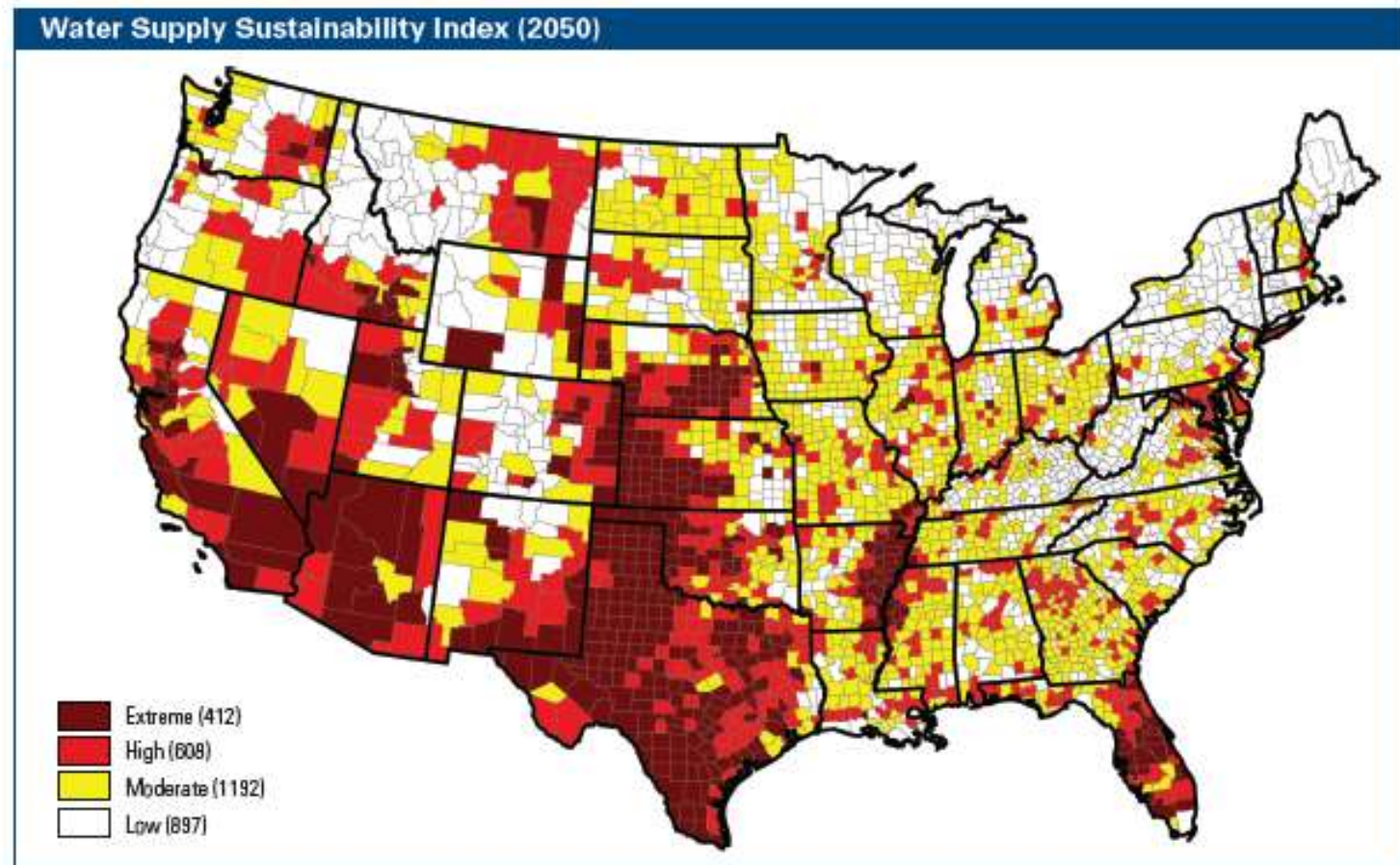


Long-term Water Supply Availability

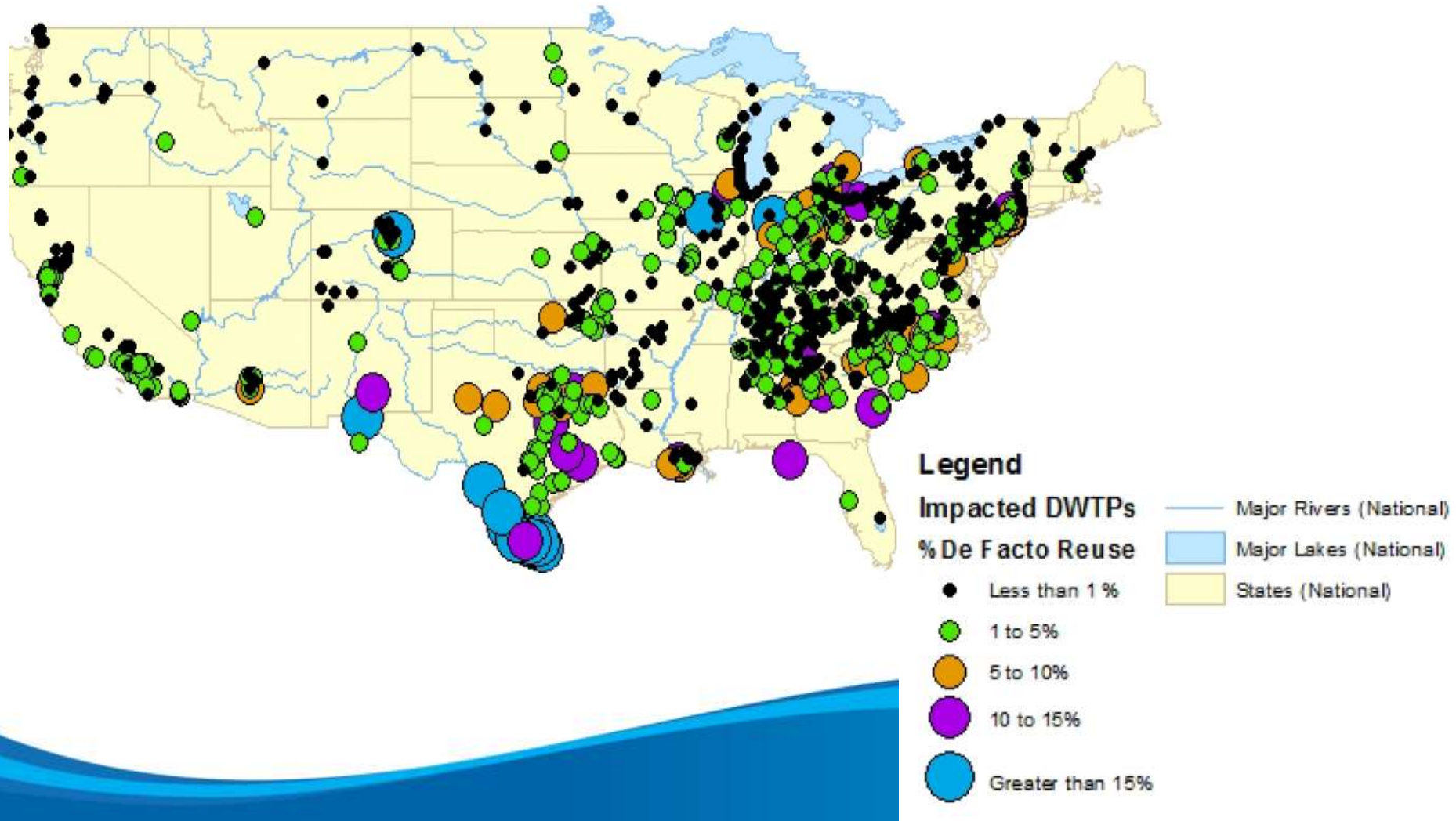
- Short-term water shortages (natural/regulatory conditions or system failure)
- Long-term shortages: population and climate changes
- Groundwater overdraft and lack of management
- Options for constrained supplies
 - Conservation: has momentum, seeing impacts in reduced demand
 - Desalination: expensive, energy intensive, brine management
 - Reuse: public perception



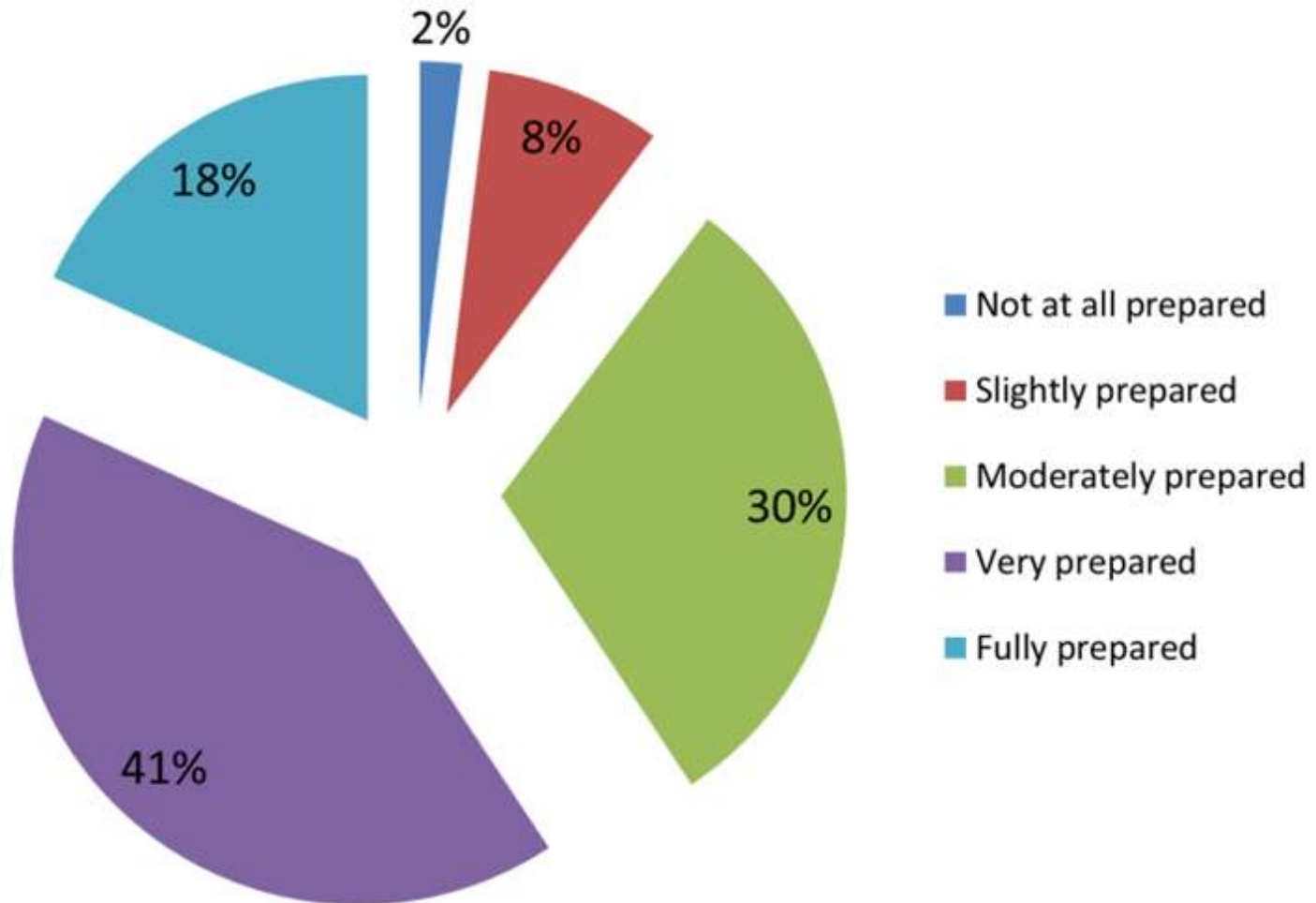
2050 Water Scarcity Considering Population & Climate Change



Indirect Unplanned Wastewater Reuse (serving population > 10,000)



“How prepared is your utility to meet its long-term water supply needs”



Public Understanding of the Value of Water

- Industry mission less urgently visible
- Clean water & sanitation are taken for granted
- Lack of public support for sustainable water rates
- Industry needs to attract new talent for a sustainable workforce

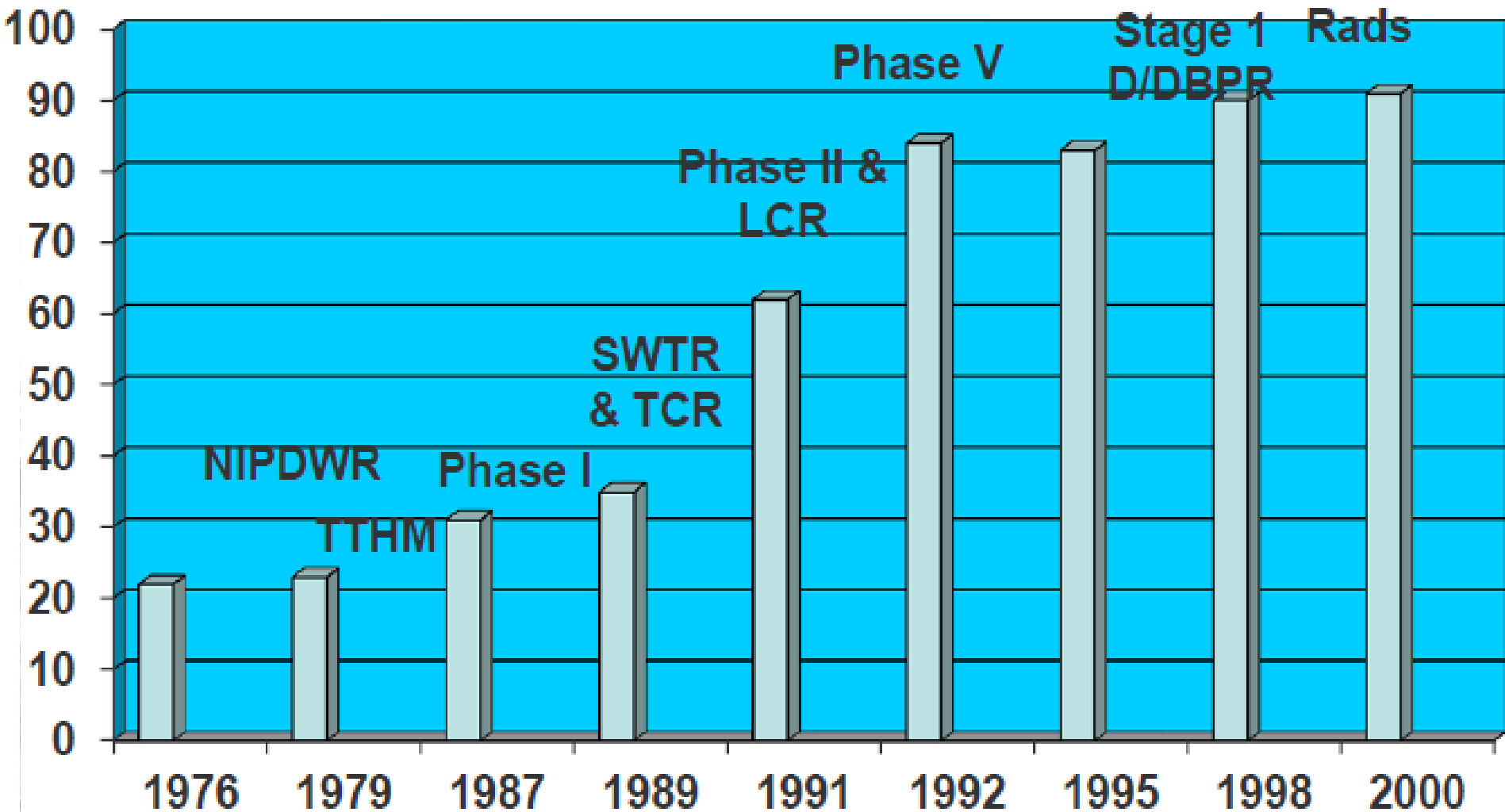


Regulatory Environment

- Regulations
 - U.S. EPA Regulations
 - Canada Provincial Regulations
- Regulations have resulted in significant technology development in past 3 decades
 - Filtration, Microbial contaminants, D/DBPs, SOCs and IOCs
- Continued pressure to address unregulated contaminants
 - Chromium, perchlorate, organics, pharmaceuticals



Number of Contaminants Regulated





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Thank You!

Think **water**. Think **AWWA**.

