American Water Works Association

Demographics and Communication

(And other Random Thoughts)

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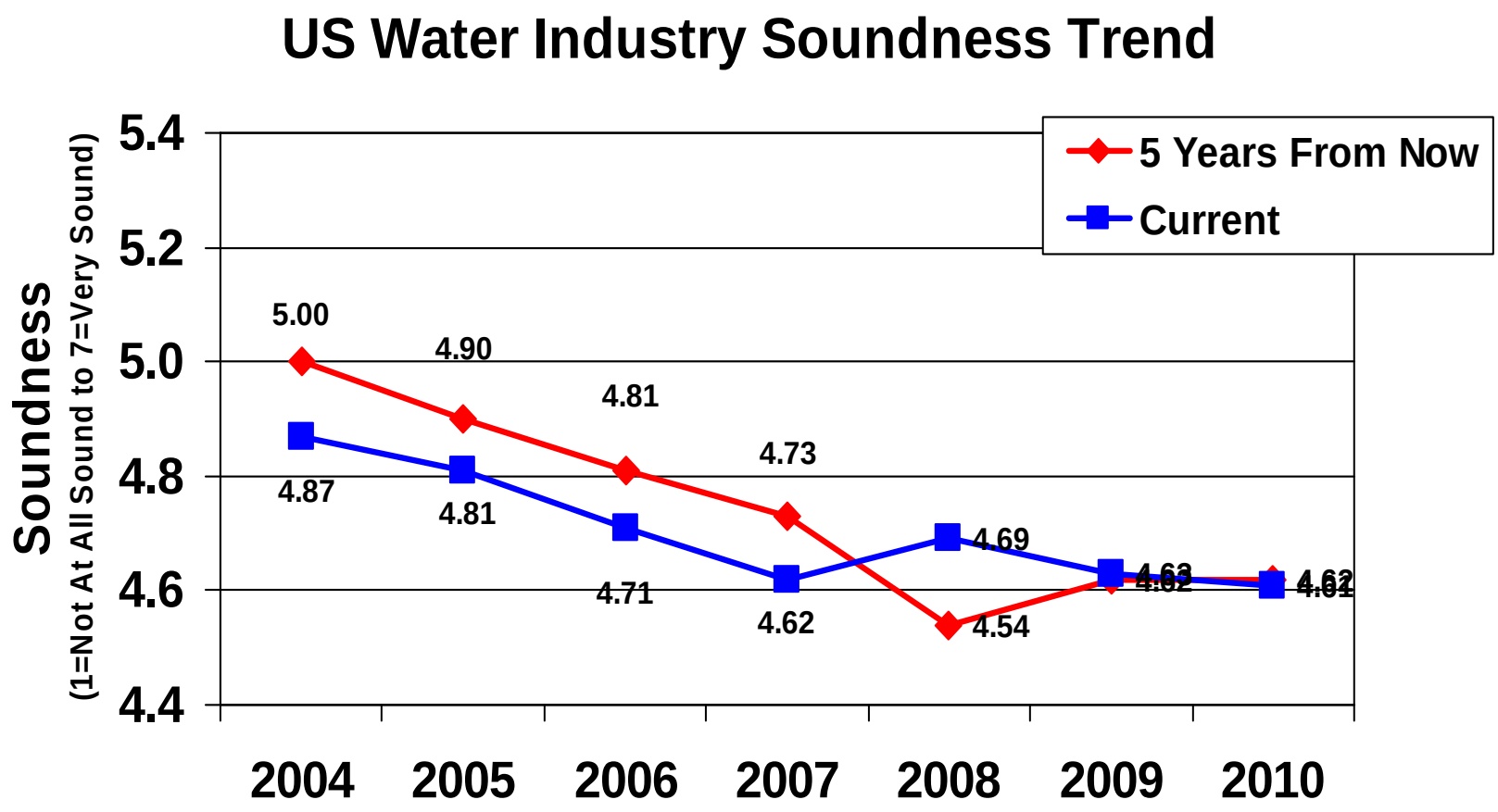
AWWA President

Objectives

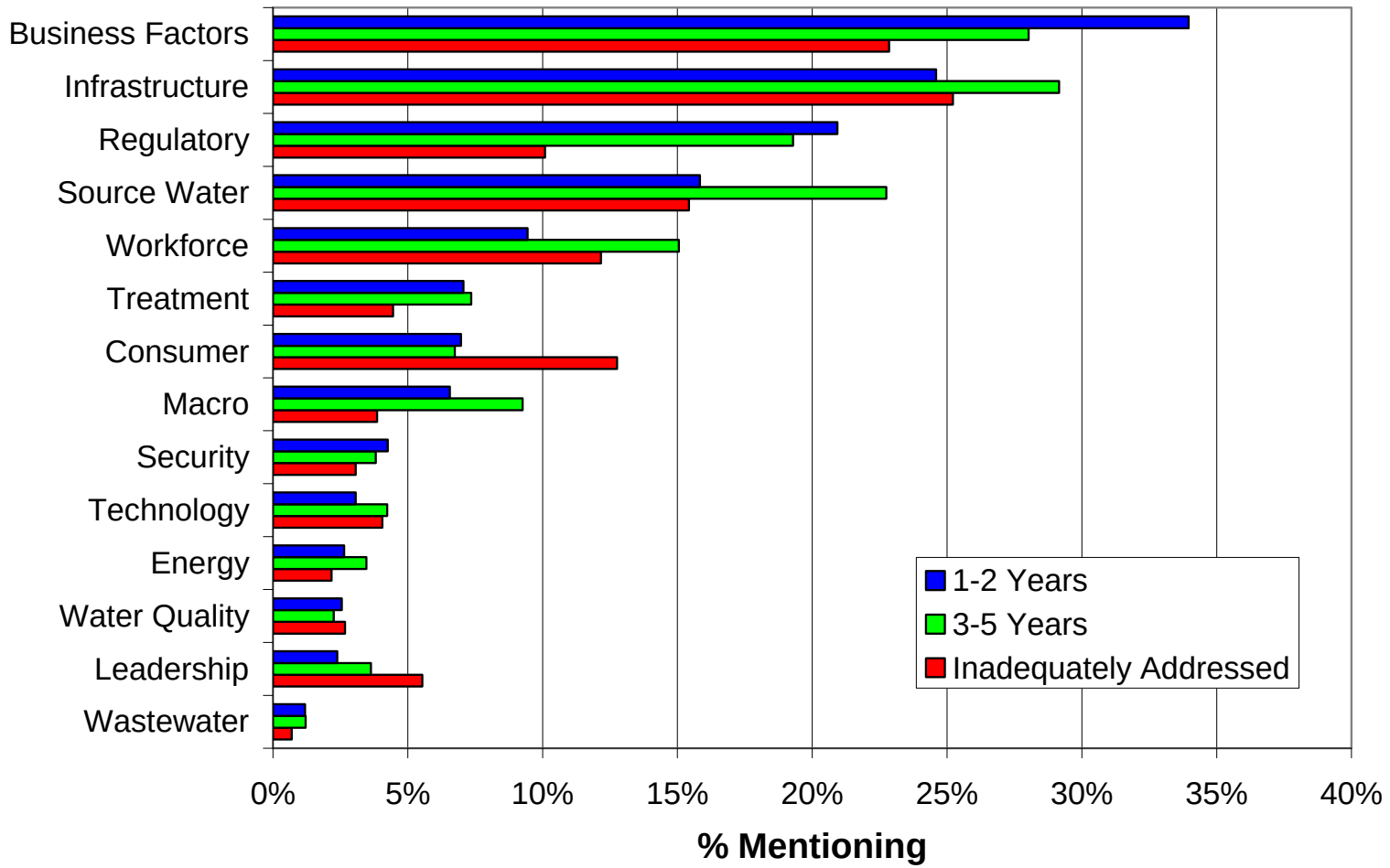
- Share some insights regarding the key issues facing the water industry
- Talk about some major demographic trends
- Discussion of implications to you, your customers and your organization

Industry Soundness

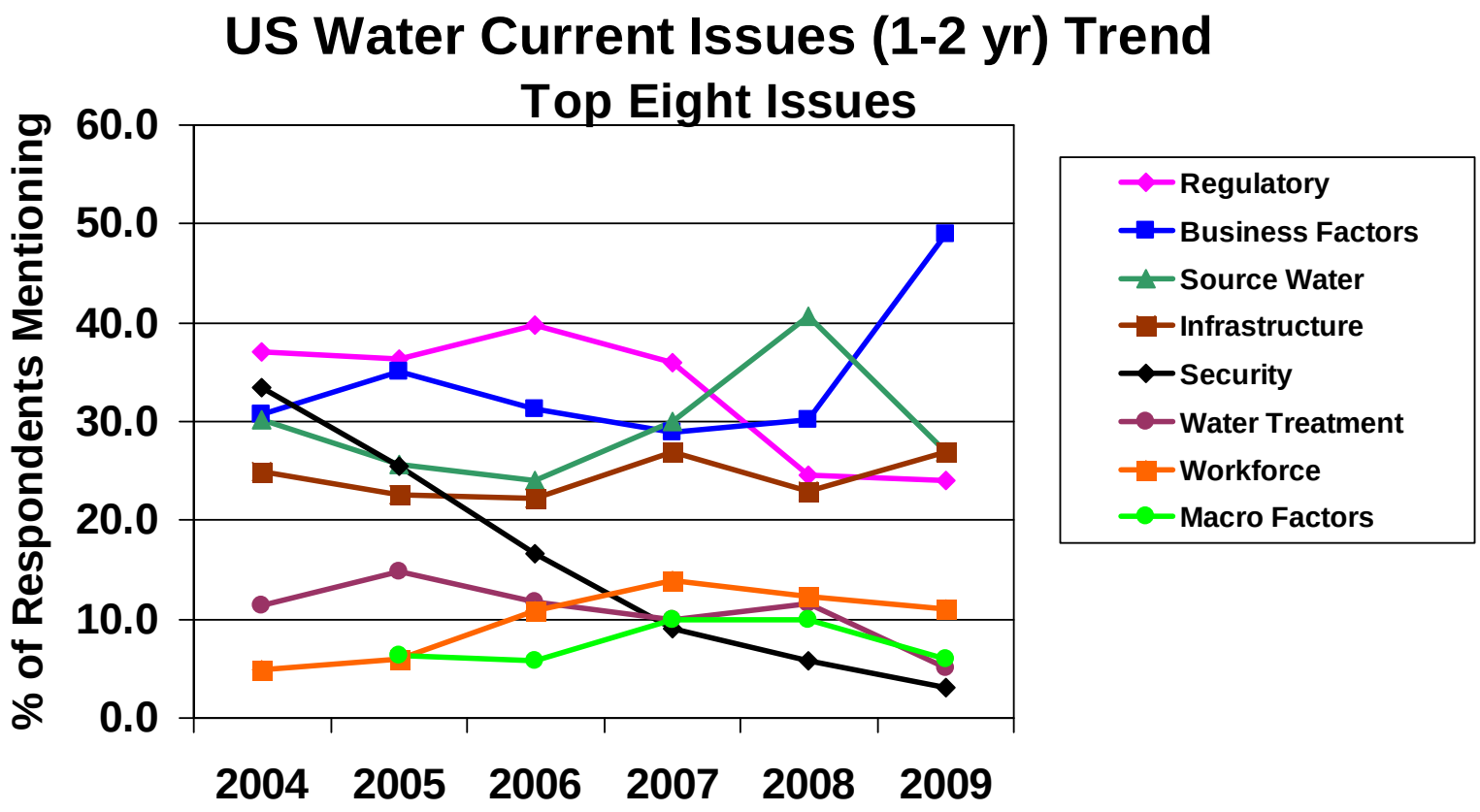


Infrastructure and Business Factors (which is also largely influenced by concerns about infrastructure financing) dominate the list of concerns in the US. Source Water, and Workforce issues continue to loom more ominous in the 3-5 year range and are relatively inadequately addressed.

ISSUES - US 2010



AWWA State of the Industry Report



Demographic Trends

- Demographics
  - Traditionalists (1922-1945)
    - 27 million
    - Loyal, hard working, respectful of authority
  - Baby Boomers (1946-1964)
    - 76 million
    - Competitive, value youthfulness, challenge authority
  - Gen X (1965-1980)
    - 60 million
    - Pragmatic, flexible, unimpressed by authority, tech savy
  - Gen Y (1981-2000)
    - 74 million
    - Confident, civic minded, peer loyalty, tech savy

Demographic Trends

- Minority Groups are Growing Fast
  - US Census Data % Growth over 2000-2010
    - +45% Asian
    - +35% Hispanic
    - +18% African American
    - +8% Caucasian
- Females Outnumber Males in the Workforce

Implications for you, your customers and your organization

- Umbrella Theme of Concerns for Sustainability
- Continued worries and uncertainties regarding the financial conditions in the broader economy
- Greater recognition of the need for higher rates in a time when rate hikes are even more unattractive politically
- Sense that the intersection of sustainability issues and the current economic environment will lead to or force changes in the operating paradigm of the water industry

- $$$
- Rates

THE NEW YORK TIMES NATIONAL

The New York

NEW YORK, THURSDAY, FEBRUARY 8, 2007

Gaping Reminders in Cities Of Aging, Crumbling Pipes

By WILLIAM YARDLEY

PORTLAND, Ore. — After a sinkholy swallowed a sewer-repair truck here on the day after Christmas, the truck's crew crawled to safety, muddy and mystified.

Last summer in Irving, Tex., a 3-year-old boy disappeared near a sinkhole. One theory was that he was kidnapped. Another was that he was lost in the sewer system that had broken open and caused the collapse.

In December, firefighters in Brooklyn rescued a grandmother carrying groceries who fell into a hole that opened beneath her on a sidewalk. And in Hershey, Pa., a damaged storm drain caused a 50-foot-deep sinkhole in Chocolate Town Park, nearly sinking the town's New Year's Eve celebration.

Local and state officials across the country say thousands of miles of century-old underground water and sewer lines are springing leaks, eroding and — in extreme cases — causing the ground above them to collapse. Though there is no master tally of sinkholes, there is consensus among civil engineers and water experts that things are getting worse.

An underground epidemic of failing infrastructure.

The Environmental Protection Agency has projected that unless cities invest more to repair and replace their water and sewer systems, nearly half of the water system pipes in the United States will be in poor, very poor or "life elapsed" status by 2020.

"I'm not exaggerating," said Joseph P. Alibee, a project director in the agency's water division who helped make the projections. "It's a really, really big public issue, and it's going to be with us for a long time."

Local geology or underground hazards are blamed for many sinkholes: weak limestone in Florida, old mineshafts in Pennsylvania. But increasingly, the authorities say, as America's cities grow older and basic repairs are put off, when the ground gives way the problem is bad pipes.

In its 2005 "Report Card for America's Infrastructure," the American Society of Civil Engineers gave water and wastewater infrastructure across the country a D-minus and suggested it would take an investment of $250 billion to bring wastewater infrastructure alone up to par.

Estimates vary on what the costs could be, but nervous water utilities and environmental groups have been campaigning to educate the public and local elected officials to get more money for repairs. But they face an uphill battle, persuading people to pay higher water and sewer rates, and politicians to approve those rates instead of building new schools, parks, libraries and roads.

"You can't easily go to a ribbon-cutting or have your picture taken in front of a new sewer line," said Dean Marriott, director of the Portland Bureau of Environmental Services, which oversees sewer maintenance in the city. "Everyone simply counts on them working. Most people don't know how they work or even where the system is."

Still, Mr. Alibee, the E.P.A. official, said age and neglect could prove as fatal to a system as a catastrophic natural event or a terrorist attack.

"You can lose that system all at once because of terrorism," Mr. Alibee said, "but you can lose it over time by just not taking care of it."

The American Water Works Association, whose members include more than 4,700 utilities, has begun an advertising campaign "to raise this conversation about buried water infrastructure above ground," said Greg Kail, a spokesman for the association.

One advertisement, placed in spots from bus shelters in Miami to newspapers in Anchorage, features a picture of a faucet with the words, "Do you know how often you turn me on?" Another ad in the works will focus directly on problems with water mains, and include the phrase, "Don't let me break down in front of you."

"The concept is to personify the infrastructure," Mr. Kail said. "We're not trying to scare people. We're trying to make them aware that this is a real concern that deserves our attention to keep it from being a crisis in the future."

The bulk of the water and sewer lines beneath American streets were installed in three phases: at the end of the 19th century, in the 1920s, and just after World War II, echoing periods of population growth in cities and expansion into suburbs.

A burst of environmentalism in the 1970s, including passage of the Clean Water Act, led to improvements in water and sewage treatment facilities and increased federal scrutiny of the water supply. But the condition of underground water and sewage pipes, many of which were built to last only 50 to 75 years, has not always received the same attention. At the same time, demand has increased.

"The pipes age, and the population increases," said James W. Rush, editor of Underground Infrastructure Management, a trade magazine for public utility administrators. "Those are the two factors that are always at work."

Portland has had a boom in downtown development, adding demand to its water and sewer systems.

The city is in the 16th year of a 20-year, $1.4 billion, federally mandated project to reduce sewage overflows into the Willamette River from about 100 days a year to 4 days or less. Signs in the city promote two enormous sewer and storm water lines being dug as part of the project, one on the west bank of the Willamette that is 14 feet in diameter and another on the east side that is 22 feet in diameter.

"I've walked them," said Mr. Marriott, the Portland official. "You could roll a marble from one length to the next — beautiful, beautiful work. What goes in them is stuff that used to go in the river."

Overflows are a problem in many cities, and fixing them is not cheap. Portland has some of the highest water and sewer rates in the country. Mr. Marriott said the average residential sewer bill in Portland has risen to about $65 a month from about $14 in the early 1990s, when the city began the mandated improvements.

Once the project is completed, he said, rates will probably stay high so that the city can fix other problems, like the sewer pipe decay that officials believe most likely helped cause the sinkhole in December, the one that swallowed the sewer truck.

Mack McEachern was there on that chilly morning. First the water in his apartment on Southeast Oak Street stopped running. Then the boiler in the basement began to fade. Water-utility workers came to check an exterior main. The city inspected a clogged sewer line. Something was wrong with the system, but what?

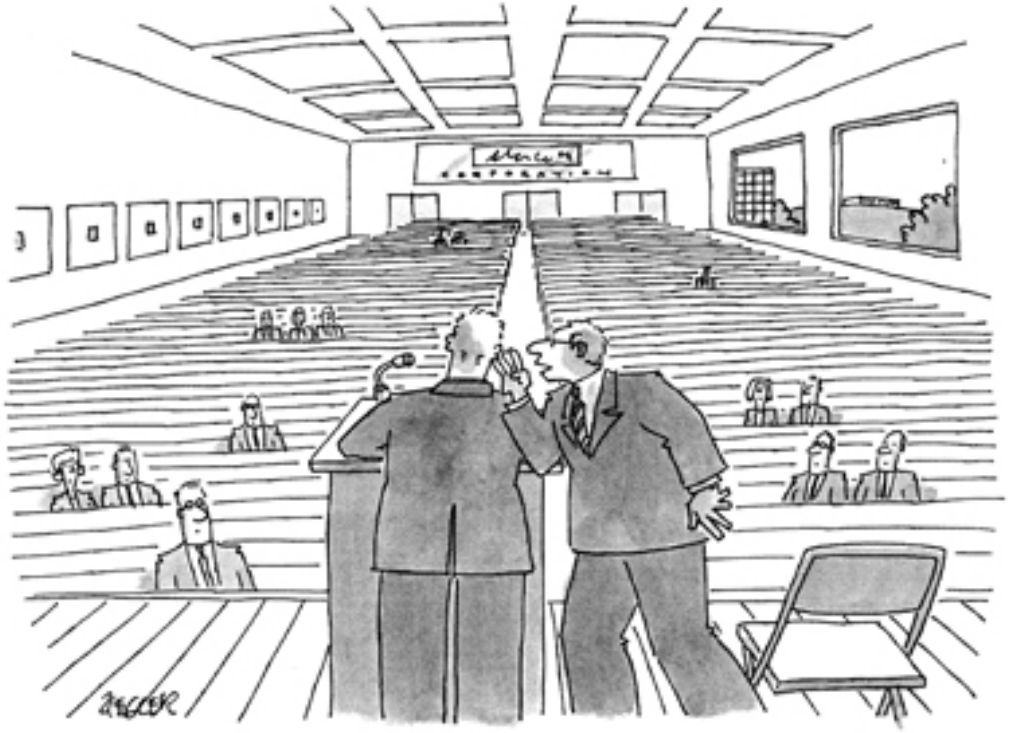
Mr. McEachern recalled how he stood outside and watched the big sewer truck start to pull away, supposedly without having pinpointed the problem.

Then, he said, "The ground shook."

A sewer-repair truck called to investigate a clog in Portland, Ore., in December ended up in a sinkhole created when underground pipes collapsed.

- Globalization and multiculturalism the new norm
- Multiple communication approaches needed to reach your customers (and co-workers)

“Cut a few thousand jobs here, boss, a few thousand jobs there, and they start to add up.”



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The National Water Sector View

- By 2010, half of the baby- boomers will be between the ages of 54 and 64 and will retire. (Bureau of Labor Statistics)

- The peak of these workforce retirements is projected to peak between the years 2010-2020.

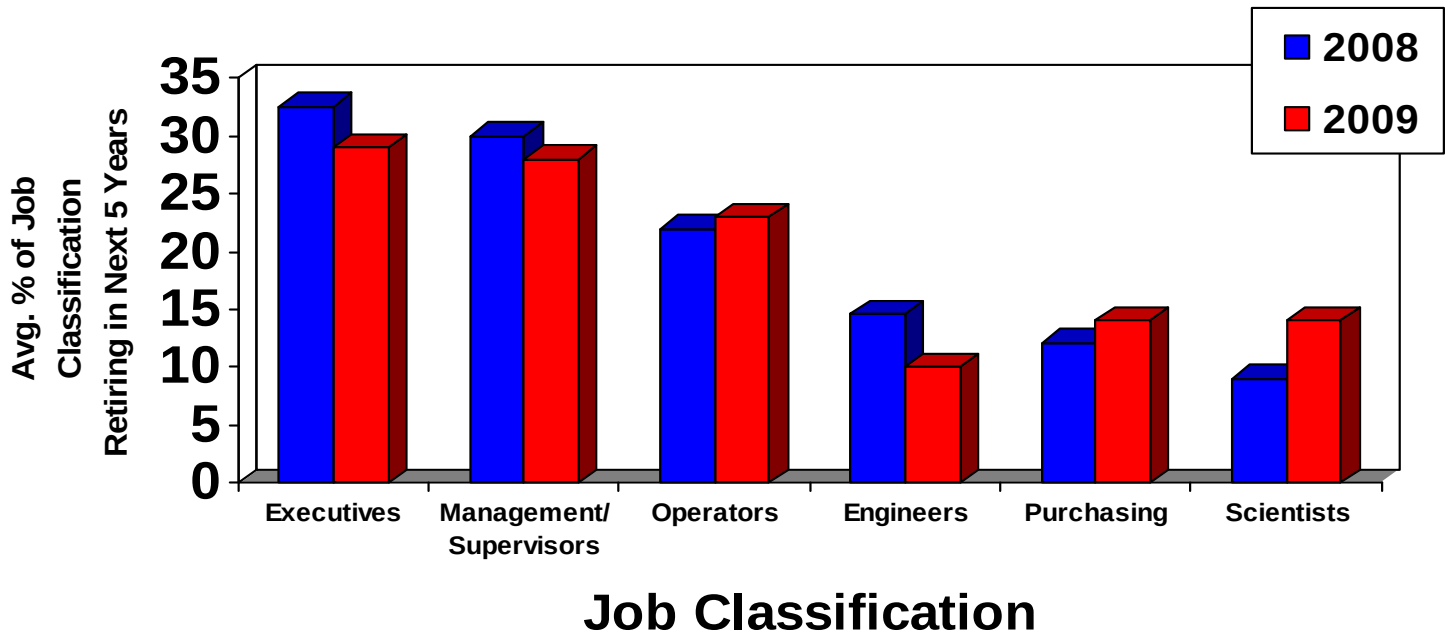
- The water industry will experience an even greater loss as the facts from AwwaRF/WERF report, “Succession Planning for a Vital Workforce in the Information Age” suggest.

AWWARF/WERF Report

AWWARF/WERF Report, “Succession Planning for a Vital Workforce in the Information Age.”

- The current average age of a water utility workers is 44.7
- The current average age of wastewater worker is 45.4
- The average age of all other workers in the nation is four years younger, approximately 41 years of age
- The average retirement age for utility personnel is 56
- **It is projected that in the next ten years, 37% of water utility workers and 31% of wastewater utility workers will retire.**

NATIONAL RESEARCH-STATE OF THE INDUSTRY REPORT



AWWA Workforce Business Plan - Objectives

- Enhance the image of water jobs to appeal to current and future labor pools.
- Improve our outreach to educational organizations including K-12, community colleges, and universities.
- Establish a clearinghouse to share workforce information and best practices.
- Improve the definition of water sector career pathways to accommodate a mobile workforce and facilitate the common skills based competencies and training Implement standard operating procedures to increase knowledge transfer.

WORK FOR WATER !

- **Support Public Health**
- **Engage in Social and Technical Innovation**
- **Put Your Skills to Work in a Global, GREEN Economy**

American Water Works Association

Questions?

Thank You!