

Deferring Maintenance... Indefinitely?



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It seems that there is a water main break just about every hour in some part of the country. Two hundred and forty thousand water main breaks per year occur in the U.S., to be more specific, according to the U.S. Environmental Protection Agency (EPA). So it is true—our infrastructure is old, outdated and, in some areas, significantly undersized.

Unfortunately, the current approach to infrastructure planning and financing is inadequate, not to mention its effect on long-term sustainable goals, environmental protection, economic health and quality of life.

But don't just take my word for it: Let's review some figures to help paint a better infrastructure picture:

- According to the American Society of Civil Engineers, America's drinking water systems face an annual shortfall of at least \$11 billion to replace aging facilities that are near the end of their useful lives and to comply with existing and future federal water regulations.

- Leaking pipes lose an estimated 7 billion gal of clean drinking water per day, and unbilled and unaccounted for water is a constant concern for municipalities.
- The design life of drinking water distribution systems is 60 to 95 years, according to the EPA Clean Water and Drinking Water Infrastructure Gap Analysis Report.
- Between 1950 and 2000 the population of U.S. has more than doubled; usage of water per day has increased by more than 200%; and per capita usage has gone up by 20%.

Most of our water infrastructure is aging in place and requires routine investment in repair and rehabilitation to remain usable in the future. Municipalities, however, rarely have this type of funding set aside and continue to rely on infrastructure from more than 40 or even 100 years ago.

Distribution systems especially are a big concern. Despite being an asset, which represents the majority of physical infrastructure for water supplies, distribution system maintenance, repair and replacement is a huge financial liability. Municipalities are rarely able to finance the rehabilitation of deteriorating pipelines and instead employ deferred maintenance and replacement practices until an incident or a significant leakage occurs to finally justify a repair.

So what are the options? I wish I had a straight answer.

It is likely that the financial challenges facing water infrastructure today will not be solved with one simple approach. Improved management practices that allocate funds to asset management instead of emergency repairs is one option. Another option, as well as a big step, is effective rate management. Currently, distribution systems are plagued by the out-of-sight, out-of-mind mentality, and public support for funding of distribution system maintenance is anywhere from weak to nonexistent. The operation and maintenance of all water infrastructure systems should be financed based on the actual anticipated costs through proper asset management, and it should also factor in routine maintenance and replacement costs. It is time that rates reflect the full costs of water infrastructure and systems stop deferring maintenance indefinitely. It is too big of a problem to ignore any longer.

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