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Saving U.S. Water and Sewer Systems Would Be Costly

By CHARLES DUHIGG

WASHINGTON — One recent morning, George S. Hawkins, a long-haired environmentalist who now leads one of the largest and most prominent water and sewer systems, trudged to a street corner here where water was gushing into the air.

A cold snap had ruptured a major pipe installed the same year the light bulb was invented. Homes near the fashionable Dupont Circle neighborhood were quickly going dry, and Mr. Hawkins, who had recently [taken over](#) the District of Columbia Water and Sewer Authority despite having no experience running a major utility, was responsible for fixing the problem.

As city employees searched for underground valves, a growing crowd started asking angry questions. Pipes were breaking across town, and fire hydrants weren't working, they complained. Why couldn't the city deliver water, one man yelled at Mr. Hawkins.

Such questions are becoming common across the nation as water and sewer systems break down. Today, a significant water line bursts on average every two minutes somewhere in the country, according to a New York Times analysis of [Environmental Protection Agency](#) data.

In Washington alone there is a pipe break every day, on average, and this weekend's intense rains overwhelmed the city's system, causing untreated sewage to flow into the Potomac and Anacostia Rivers.

State and federal studies indicate that thousands of water and sewer systems may be too old to function properly.

For decades, these systems — some built around the time of the Civil War — have been ignored by politicians and residents accustomed to paying almost nothing for water delivery and sewage removal. And so each year, hundreds of thousands of ruptures damage streets and homes and cause dangerous pollutants to seep into drinking water supplies.

Mr. Hawkins's answer to such problems will not please a lot of citizens. Like many of his counterparts in cities like Detroit, Cincinnati, Atlanta and elsewhere, his job is partly to persuade the public to accept higher water rates, so that the utility can replace more antiquated pipes.

"People pay more for their cellphones and cable television than for water," said Mr. Hawkins, who before taking over Washington's water system ran environmental groups and attended Princeton and [Harvard](#), where he never thought he would end up running a sewer system.

"You can go a day without a phone or TV," he added. "You can't go a day without water."

But in many cities, residents have protested loudly when asked to pay more for water and sewer services. In Los Angeles, Indianapolis, Sacramento — and before Mr. Hawkins arrived, Washington — proposed rate increases have been scaled back or canceled after virulent ratepayer dissent.

So when Mr. Hawkins confronted the upset crowd near Dupont Circle, he sensed an opportunity to explain why things needed to change. It was a snowy day, and while water from the broken pipe mixed with slush, he began cheerily explaining that the rupture was a symptom of a nationwide disease, according to people present.

Mr. Hawkins — who at 49 has the bubbling energy of a toddler and the physique of an aging professor — told the crowd that the average age of the city's water pipes was 76, nearly four times that of the oldest city bus. With a smile, he described how old pipes have spilled untreated sewage into rivers near homes.

"I don't care why these pipes aren't working!" one of the residents yelled. "I pay \$60 a month for water! I just want my toilet to flush! Why do I need to know how it works?"

Mr. Hawkins smiled, quit the lecture, and retreated back to watching his crew.

On Capitol Hill, the plight of Mr. Hawkins and other utility managers has become a hot topic. In the last year, federal lawmakers have allocated more than \$10 billion for water infrastructure programs, one of the largest such commitments in history.

But Mr. Hawkins and others say that even those outlays are almost insignificant compared with the problems they are supposed to fix. An E.P.A. study last year estimated that \$335 billion would be needed simply to maintain the nation's tap water systems in coming decades. In states like New York, officials estimate that \$36 billion is needed in the next 20 years just for municipal wastewater systems.

As these discussions unfold, particular attention is being paid to Mr. Hawkins. Washington's water and sewer system serves the White House, many members of Congress, and two million other residents, and so it surprised some when Mr. Hawkins was hired to head the agency last September, since he did not have an engineering background or the résumé of a utility chief.

In fact, after he had graduated from Harvard Law School in 1987, he spent a few years helping companies apply for permits to pollute rivers and lakes. (At night — without his firm's knowledge — he had a second career as a professional break dancer. He met his wife, a nurse, when he fell off a platform at a dance club and landed on his head.)

But he quickly became disenchanted with corporate law. He moved to the E.P.A., where he fought polluters, and then the White House, and eventually relocated his family to a farm in New Jersey where they shoveled the manure of 35 sheep and kept watch over 175 chickens, and Mr. Hawkins began running a series of environmental groups.

The mayor of Washington, [Adrian M. Fenty](#), asked Mr. Hawkins to move to the city in 2007 to lead the Department of the Environment. He quickly became a prominent figure, admired for his ability to communicate with residents and lawmakers. When the Water and Sewer Authority needed a new leader, board members wanted someone familiar with public relations campaigns. Mr. Hawkins's mandate was to persuade residents to pay for updating the city's antiquated pipes.

At a meeting with board members last month, Mr. Hawkins pitched his radical solution. Clad in an agency uniform — his name on the breast and creases indicating it had been recently unfolded for the first time — Mr. Hawkins suggested raising water rates for the average resident by almost 17 percent, to about \$60 a month per household. Over the coming six years, that rate would rise above \$100.

With that additional money, Mr. Hawkins argued, the city could replace all of its pipes in 100 years. The previous budget would have replaced them in three centuries.

The board questioned him for hours. Others have attacked him for playing on false fears.

"This rate hike is outrageous," said [Jim Graham](#), a member of the city council. "Subway systems need repairs, and so do roads, but you don't see fares or tolls skyrocketing. Providing inexpensive, reliable water is a fundamental obligation of government. If they can't do that, they need to reform themselves, instead of just charging more."

Similar battles have occurred around the nation. In Philadelphia, officials are set to start collecting \$1.6 billion for [programs](#) to prevent rain water from overwhelming the sewer system, amid loud complaints. Communities surrounding Cleveland threatened to sue when the regional utility proposed charging homeowners for the water pollution running off their property. In central Florida, a \$1.8 billion proposal to build a network of drinking water pipes has drawn organized protests.

"We're relying on water systems built by our great-grandparents, and no one wants to pay for the decades we've spent ignoring them," said Jeffrey K. Griffiths, a professor at [Tufts University](#) and a member of the E.P.A.'s [National Drinking Water Advisory Council](#).

"There's a lot of evidence that people are getting sick," he added. "But because everything is out of sight, no one really understands how bad things have become."

To bring those lapses into the light, Mr. Hawkins has become a cheerleader for rate increases. He has begun a media assault highlighting the city's water woes. He has created a blog and a [Facebook page](#) that explain why pipes break. He regularly appears on newscasts and radio shows, and has filled a [personal Web site](#) with video clips of his appearances.

It's an all-consuming job. Mr. Hawkins tries to show up at every major pipe break, no matter the hour. He often works late into the night, and for three years he has not lived with his wife and two teenage children, who remained in New Jersey.

"The kids really miss their father," said his wife, Tamara. "When we take him to the train station after a visit, my daughter in particular will sometimes cry. He's missing out on his kids' childhoods."

And even if Mr. Hawkins succeeds, the public might not realize it, or particularly care. Last month, the utility's board [approved](#) Mr. Hawkins's budget and started the process for raising rates. But even if the bigger budget reduces the frequency of water pipe breaks by half — a major accomplishment — many residents probably won't notice. People tend to pay attention to water and sewer systems only when things go wrong.

"But this is a once-in-a-lifetime opportunity," Mr. Hawkins said recently, in between a meeting with local environmentalists and rushing home to do paperwork in his small, spartan apartment, near a place where he was once mugged at gunpoint.

"This is the fight of our lifetimes," he added. "Water is tied into everything we should care about. Someday, people are going to talk about our sewers with a real sense of pride."