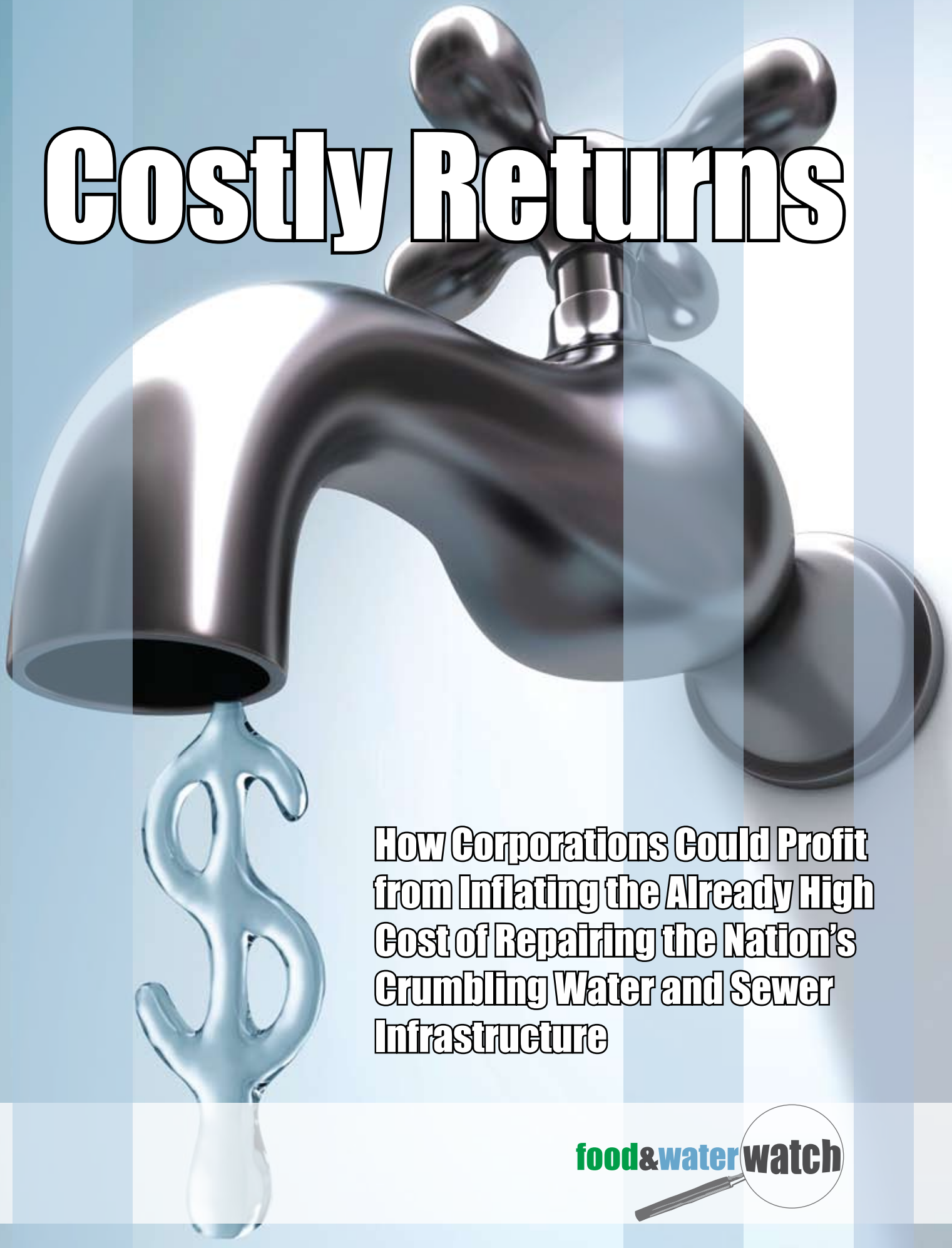
Costly Returns



How Corporations Could Profit from Inflating the Already High Cost of Repairing the Nation's Crumbling Water and Sewer Infrastructure

food&waterwatch

About Food & Water Watch

Food & Water Watch is a nonprofit consumer organization that works to ensure clean water and safe food. We challenge the corporate control and abuse of our food and water resources by empowering people to take action and by transforming the public consciousness about what we eat and drink. Food & Water Watch works with grassroots organizations around the world to create an economically and environmentally viable future. Through research, public and policymaker education, media, and lobbying, we advocate policies that guarantee safe, wholesome food produced in a humane and sustainable manner, and public, rather than private, control of water resources including oceans, rivers and groundwater.

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Table of Contents

Executive Summary

Although public utilities provide water to about 86 percent of people on community water systems, a private sector push is on to change this. The corporate water barons are salivating at the prospect of profiting from the drinking water and wastewater infrastructure crisis facing the United States.[1] Already, U.S. cities endure 250,000 to 300,000 water main breaks, lose one-fifth of their water through leaks and suffer 1.2 trillion gallons of wastewater spills each year.[2,3] Americans will spend up to $1 trillion by 2019 to upgrade and repair our 1.5 million miles of piping and the treatment plants to avoid a public health crisis.[4]

Absent a needed increase in federal assistance, consumers and communities across the nation will see their bills continue to climb as utilities make necessary repairs and upgrades. Yet, corporate advocates are deceitfully using the costliness of those upgrades as ammunition to push elected officials into privatizing their water and sewer systems.

Instead of solving our water crisis, privatization pads the pockets of corporate water barons. A 2007 report compiling newsletters from July 2006 to the end of 2007 by investment firm Boenning & Scattergood reveals that, thanks to some fancy finance and accounting, private utilities tie higher earnings to *increased* costs. Corporations have a financial incentive to oppose conservation, protection of drinking water sources and other policies and programs that would save money and help offset the economic burden on communities across the nation. Wasted water drives up a company's revenue, which flows from people's water bills.

The investor research firm states that a "high profile system failure would 'help' the situation." Experts believe that if "faulty underground infrastructure were to interrupt a major city's water supply for an extended period," the public would be less resistant to rate hikes that benefit corporations.[5]

The Boenning & Scattergood report reveals that a future favorable to investor owned utilities is a future with poor consumer protections, a limited or non-existent federal safety net for low income communities and large infrastructure investments built to maximize profit, not the interest of the environment or the public. In fact, the prophets of privatization speak out against a federal trust fund for our water and sewer systems. In their view, "every dollar that the federal government injects into local water systems is a dollar that will not go into someone's rate base…"[6] That "someone" is a water corporation and the "rate base" is revenue from community bills.

Federal funding would reduce financing costs, allow small municipal systems to fend off privatization and ease the financial burden on families across the nation. Indeed, when Congress passes a federal trust fund, it should be available only to the publicly owned and operated utilities that serve most of the nation's population.

Introduction

Every month, more than one billion gallons of water seep from a deeply buried, 70-year-old tunnel – the Delaware Aqueduct – that carries water to New York City. In a town two hours north, some of that leakage has formed a football field-sized marsh that floods basements and turns yards into swamps.[7]

But that's a mere drop in our big bucket of water woes. With 250,000 to 300,000 water main breaks each year, many other cities – from Chicago to Denver – also are suffering the consequences of aging infrastructure.[8] In total, drinking water systems waste one-fifth of their water through leaks, and sewer systems spill an estimated 1.2 trillion gallons of wastewater through overflows.[9] And things are only expected to grow worse over the next few years.

Unfortunately, when it comes to solutions, cities are finding that the federal assistance they've traditionally relied on is drying up, leaving them to face these expensive problems alone. As a consequence, households around the country will have to pay an average of $10,000 over the next three decades to repair their water systems.[10]

Even after accounting for those increased water and sewer rates, many utilities just do not have enough money to pay the enormous costs of these necessary improvements. So it shouldn't come as a surprise that communities need and want, by an overwhelming margin of six to one, a national trust fund to repair, renovate and rejuvenate our water systems.[11]

Yet, incredibly, instead of supporting the federal funding that their constituents want, several elected officials, including the governor of California, are pushing the private sector as the solution to our infrastructure crisis.

They argue that corporations can more easily access capital to finance improvements and offer cost-reducing efficiencies for cash-strapped communities. But it's not true, as many cities that have had nightmarish experiences will attest. Maintenance problems in Atlanta and sewage spills in Milwaukee, for example, suggest that local governments should approach privatization with caution.

Indeed, the most worrisome aspect of private financing is how corporations actually profit: Their income is a percentage of the amount they spend on infrastructure, providing companies with a strong financial incentive to unnecessarily drive up the already high improvement costs – forcing communities to pick up the bloated tab. In particular, they should be concerned about the excessive price of obtaining water from desalination, sewage water reuse and other dangerous and environmentally destructive technologies that many private utilities are actively pursuing.

Often, the touted efficiencies of the private sector amount to little more than downsizing the workforce and cutting employee benefits – two actions that surely would work against timely and effective completion of improvement projects on aging systems. Besides, public utility operators have already picked up and implemented the other efficiency measures attributed to the private sector. For example, they've effectively used fewer treatment chemicals to achieve the same level of water purity.

In fact, because of the public sector's surging efficiency, at least three cities – Houston, Texas and Petaluma and Fairfield-Suisun, Calif. – terminated their contracts with private water companies for certain services and plants; the cities claimed cost savings of 8 percent to 15 percent. "There's a feeling that the public sector has adopted a lot of the management practices of the private sector," said Michael Ban, the director of the water department in Petaluma, where

Because of the public sector's surging efficiency, at least three cities – Houston, Texas and Petaluma and Fairfield-Suisun, Calif. – terminated their contracts with private water companies; the cities claimed cost savings of 8 percent to 15 percent.

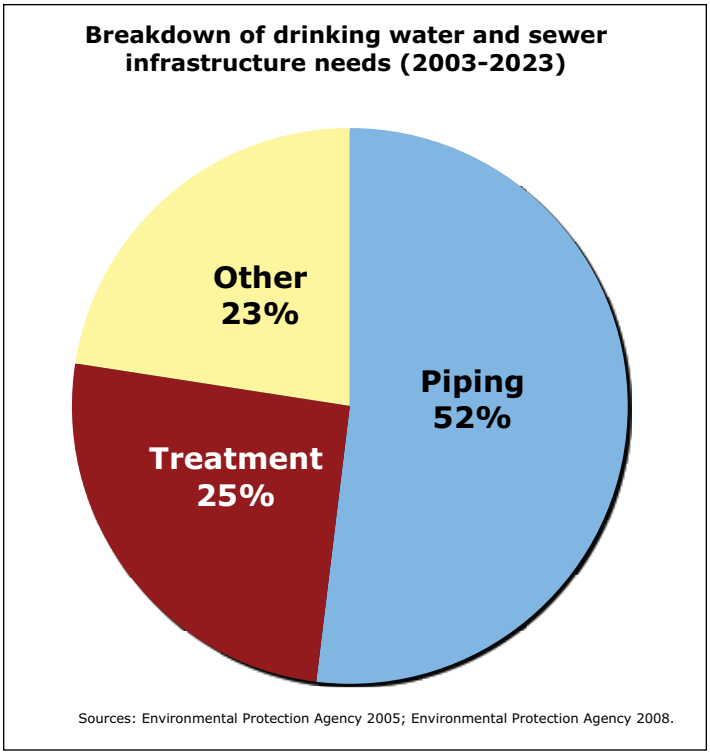
the sewer system had been privately operated for nearly 30 years. "We've learned."[12]

Furthermore, both of those California cities concluded that they would achieve these savings while offering better employee compensation packages. Such benefits attract the skilled operators who improve service and keep systems in environmental compliance from a dwindling pool of qualified applicants. And both cities recognized that, unlike corporate income, employee salaries and wages stay in the community and benefit the local economy.[13,14]

In addition, private financing is almost always more expensive than the public sector. The latter can sell bonds or take out a loan at a lower interest rate than is available to corporations. Along with higher interest payments, private utilities force communities to pay the additional costs of taxes, profits and regulatory fees.

Key Findings

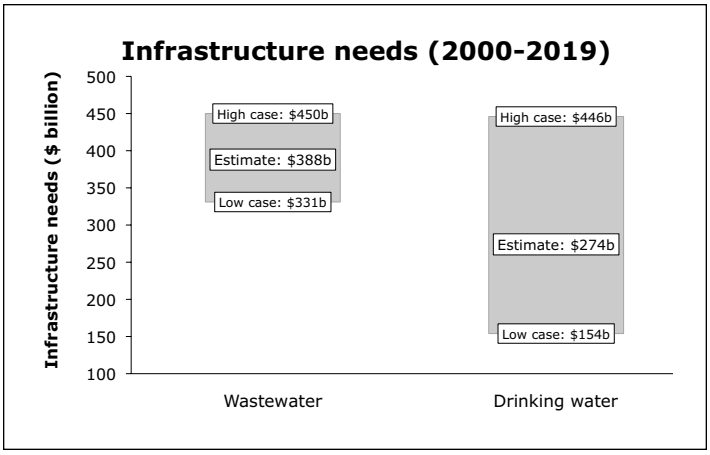
- Private water companies want to increase, not decrease, consumers' water and sewer bills.
- Corporations oppose efforts to establish a federal trust fund for clean drinking water and wastewater infrastructure because it would decrease their profits.
- Privatization of water and sewer systems worsens our current infrastructure problems and costs more money.
- The private sector has little incentive to implement water conservation because the companies' profits depend on how much water is sold.



U.S. Water Infrastructure Background

Our nation's drinking water and sewer infrastructure spans almost 1.5 million miles of piping, including about 640,000 miles of sewer lines.[25] This network of pipes carrying life-giving water in and taking waste out sustains our society, economy and way of life. But our water systems are wearing out and in need of repair.

Already, water and wastewater utilities will face considerable repair and replacement costs over the next few decades.[26] The Environmental Protection Agency estimates that the cost of maintaining and improving water and sewer infrastructure will be more than $600 billion through 2019.[27] Around half of this is needed to replace piping and to repair aging distribution and conveyance systems.[28,29]



In Their Own Words: Equity Research Firm Boenning & Scattergood, Inc. on Investor Owned Water Utilities

"A high-profile system failure would 'help' the situation by helping to wake the public from its current 'Out of Sight, Out of Mind' complacency with regard to water infrastructure and increasing the urgency of water-related projects relative to other areas of public spending. Even in the absence of such a disaster, however, pricing will likely continue to gradually move closer to reflecting the full cost borne by water providers, and the result will be a continuation of the trend toward more sizeable rate rewards by regulators, and greater acceptance of such rate hikes by customers."[15]

"[T]he investment case for [investor owned utilities] is predicated on two key growth drivers, rate base expansion and ongoing industry consolidation, and federal funding for water system improvements is an incremental negative for both. . . In terms of rate base, theoretically, every dollar that the federal government injects into local water systems is a dollar that will not go into someone's rate base (either now or several years hence, when the struggling system is eventually forced to sell to an IOU, which makes the investment and files for rate relief)."[16]

"For both utilities and providers of related equipment & technology, continued growth in water prices is an important sign that the industry is on its way toward realizing its investment potential."[17]

"[T]he rehabilitation of aging [waste-water] systems should provide a growing source of demand for years to come."[18]

"The inevitable consolidation process not only provides an additional source of growth for those investor owned utilities making the strategic decision to enter the waste-water business, but also helps to enable the considerable infrastructure spending that experts believe is necessary."[19]

"Full-Cost pricing is vital to the water sector realizing its long term investment potential, and recent trends indicate the industry is moving in the right direction."[20]

"[T]he wastewater market is highly fragmented, with more than 16,000 independent systems nationwide, and coupled with less austere pricing regulation (most WW utilities do not operate under the 'regulated return' framework), this has lead some utilities executives to make wastewater a focus of their corporate growth strategy."[21]

"With major spending increases on the way and recent rate case activity pointing toward a more favorable funding environment, companies serving the water infrastructure market are poised to benefit from the impending swell in spending."[22]

"While some Federal (sic) spending is likely and particularly troubled systems may receive targeted state-level assistance, the majority of the spending required to renovate the nation's water infrastructure will come in the form of increased rates."[23]

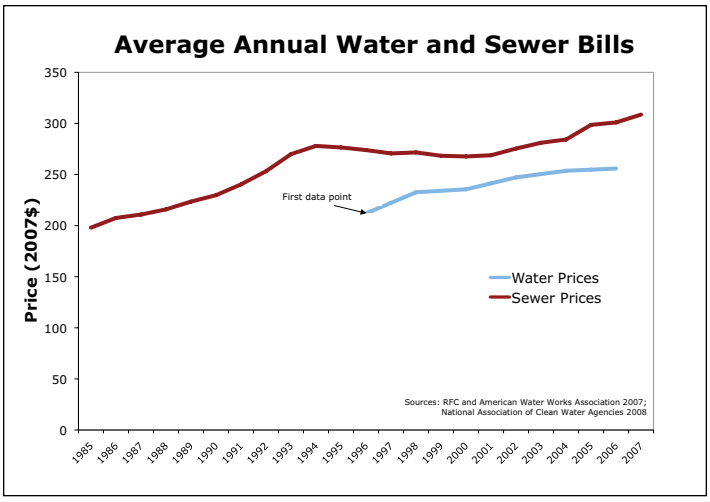
"Though protesters have had a few high-profile successes – such as causing problems for European water behemoth RWE's California operation as profiled in a front-page *Wall Street Journal* feature article (June 26, 2006) – the financial pressures facing small systems are real, and sale to a larger entity is often the only way to keep such systems afloat."[24]

Many pipelines collectively will reach the end of their usefulness over the next 20 to 30 years,[30] and one-third of water utilities already have at least 20 percent of their pipelines nearing the end of their useful lives.[31]

But the nation's water worries don't stop with leaking pipes. Every day, scientists are learning more about the chemicals that can contaminate drinking water. As new information becomes available, and as the treatment technology becomes practical for widespread utility use, EPA adjusts the water quality standards that utilities must meet to ensure that people are not exposed to harmful levels of these substances.

The number of regulated contaminants has grown by nearly five times since the Safe Drinking Water Act was first introduced in 1976, while the allowable levels of many pollutants have decreased.[32]

Water utilities need more effective treatment technology to adhere to these increasingly demanding water quality rules. Making such upgrades constitutes one-quarter of needed infrastructure spending for water and wastewater utilities.[33,34] Unlike piping that can be installed piecemeal, treatment facilities are replaced all at once and require a lot of money in a short period of time.[35] This places a great burden on under-funded water systems.



In total, the cost of upgrading and repairing water and sewer systems could be nearly $1 trillion over the 20-year period through 2019.[36] At the same time, the United States is failing to provide substantial federal funding for its vital water and wastewater infrastructure. Just since 2001, federal funding for drinking and wastewater utilities has declined 24 percent.[37]

A federal trust fund for water and wastewater would help to make these upgrades and keep prices affordable. But the private sector applauds this dearth of government support and opposes any effort to increase it, even if funds would be available to both public and private utilities. According to Boenning & Scattergood, "federal funding for water system improvements is an incremental negative" for private utilities.[38]

"There are those that are advocating before Congress for a large grant program financed through new dedicated taxes going into a 'water trust fund,'" said Peter Cook, the executive director of the National Association of Water Companies. "This is the wrong answer."[39]

Cook claims federal support would reduce water prices, which would be misleading because people would not understand the full cost of their water. But the basis of any aversion to federal funding probably has more to do with the effects on the bottom line.

On a community level, that translates into higher and higher water and sewer bills. In 2006 alone, water and wastewater prices grew by more than 3 percent over the rate of inflation in North America — more than any other region in the world.[40] Annual household sewer bills grew by more than 50 percent from 1985 to 2006, according to a survey by the National Association of Clean Water Agencies. In today's dollars, single-family households are annually paying $100 more for sewer service now than they did in 1985.[41]

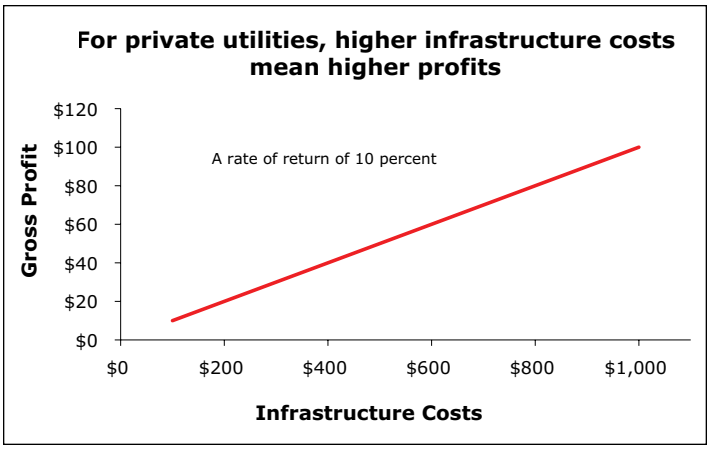
For corporations, high prices are "conducive to expanding earnings."[42] But for communities, they can be a considerable financial burden.

The Interconnectedness of Regulation and Profits

While 44 states provide some oversight of private drinking water utilities and 32 oversee wastewater (some states only regulate utilities of a certain size or income,[43] and other states also oversee municipally owned systems contracted out to private companies[44]), potentially averting exploitative rates that might otherwise occur, weak state public utilities commissions provide motivation for water and wastewater utilities to be inefficient. Regulators typically set prices so that a water company recovers all its expenses and a certain percentage of profit. Private utilities often like the world of regulation because it offers them stable and reliable profits.

A company's gross profit is a portion, usually around 10 percent, of the total amount it spends on the construction or operation of a utility.[45] The community's residents pay

From 2006 to 2007, investment firms put $105 billion into infrastructure funds, which have the express purpose of making profits that "will keep investors happy."



back all the expenses and the corporate income through their water or wastewater bills.

Because its profits are a percentage of expenditure, a company increases them by spending more money on the system. Private companies have a financial incentive to unnecessarily inflate the costs of water and wastewater systems.

For example, consider a small water system that needs new treatment equipment. A regulated company owns and operates the utility and will receive a profit of 10 percent of the amount it spends on the equipment. If it spends $1,000 on inexpensive treatment technology, its profits would be $100. And the community would pay an additional $1,100 through their water bills. But if the company buys a pricey treatment system for $5,000, its profits would be $500. And the community would pay an additional $5,500.

The incentive for inefficiency can also be present when a local government retains ownership of a water or wastewater system but privatizes its design, construction and operation. Some deals require a company to finance the initial construction costs that are then recovered, along with corporate profits, through its operation of the system and collection of household and other user bills. The company's percent of profit is usually determined in contract negotiations and is often based on how much the corporation spends to build, repair or operate the system.

This method of regulating private utilities and setting their rates has created a lucrative market, one laden with inefficiencies.

Indeed, "investing in infrastructure is all the rage," according to a feature article in the magazine *The Banker*. Investment banks such as Goldman Sachs, Morgan Stanley and Citigroup, and private equity firms such as Carlyle Group and Kohlberg Kravis Roberts, have jumped into the water and wastewater utility game.[46] From mid-2006 to mid-2007, investment firms put $105 billion into infrastructure funds, which have the express purpose of making profits that "will keep investors happy."[47]

Ways that Corporations Will Drive Up Infrastructure Costs

There are predominately two types of new water supplies that corporations are using to drive up costs and their stockholder profits:

Desalination removes salt from seawater and other salty water to make water suitable for drinking.

According to Boenning & Scattergood, "Overall, desalination represents one of the most compelling long-term growth areas within the broadly defined 'water industry.'" Industry insiders expect major growth in desalination.[112] Some of the big desalination players include General Electric, Siemens AG and Veolia.[113]

California, in particular, has planned massive seawater desalination development with 20 projects proposed along its coastline. Even though these plants would expand the state's desalination production by 70 times, water desalination would supply only 6 percent of the state's urban water needs.[114] And desalination is more expensive than traditional water treatment and conservation practices.[115] In California, not including its expensive construction and distribution, even the most efficient desalination plant will produce water at a cost per 1,000 gallons that is at least 50 percent higher than the average price currently charged by water utilities.[116,117]

Long distance pipelines transport water from water-rich areas to dry areas.

The water pipeline industry is also poised to do well in 2008.[118] Even desalination systems will require pipelines to transport water from coastlines to cities.[119] And several private utilities are planning costly projects.

For example, in Lexington, KY, American Water – the largest publicly traded U.S. water corporation – is refusing to put a price cap on a new treatment plant and 31-mile pipeline, expected to cost $160 million.[120] The Attorney General's office considered such a rejection "a 'deal-breaker.'" Opponents argued that the state's utilities commission cannot require private utilities to cap costs,[121] and it approved the project, which will increase household bills by nearly 50 percent.[122]

"When those higher water bills arrive, people will wish that someone had made Kentucky American do more about conservation years go," conjectured the editors of the *Lexington Herald-Leader*. "A government-owned utility has a much stronger incentive to keep rates down."[123]

Regulatory Environment of States with the Majority of Publicly Traded Water Utilities

State	Length of rate case process	Rate of return	Takeover incentives (financial rewards for acquiring new systems)	Temporary surcharges (rate increases that don't require regulator approval)
Pennsylvania	9 months	10.25% - 10.75%	Yes, allowed to increase profit when taking on troubled system	Yes, first to allow it. (up to 5% of total billing)
Delaware	7 months	10% - 10.5%	No	Yes (up to 7.5% of total billing)
Connecticut	6 months	9.75% - 10.25%	Yes	Yes (up to 7.5% of total billing)
California	9 to 12 months	9.75% - 10.25%	Yes (forthcoming)	Yes (forthcoming)
Texas	1 to 2 years	10% - 12%	No	No
New Jersey	9 months	9.5% - 10%	No (under consideration)	No

Based on a report by Boenning & Scattergood[143]

Boenning & Scattergood, the oldest independent investment firm in the U.S. Mid-Atlantic region, encourages investment in the water utility industry as a "defensive haven" during the current economic downturn.[48]

Involved in business with water corporations, the firm argues that private utilities offer "steady, consistent growth" and "relative certainty" of profits.[49] Joseph Sorce, the director of Fitch Ratings, agrees: "The water business is low-risk with stable and predictable cash flows."[50]

In fact, after accounting for the low risk level, the average return of water companies is more than twice that of the pharmaceutical industry and nearly three times that of the construction and engineering industries.[51] Over the last 20 years, the returns have been higher for the water sector than for Exxon, Wal-Mart and Home Depot.[52]

When corporations want to increase water rates – and thus profits – they must seek regulatory approval. In general, regulators have gone along with this. Regulators also are helping corporate profits by shortening the time it takes to process rate cases, possibly reducing public input in the process, and by encouraging consolidation with financial incentives to take over other utilities.[53] Companies are even being granted higher profit margins and permission to increase rates without a public approval process, using temporary infrastructure improvement surcharges.[54,55]

Of course, each regulatory commission is different, and they all depend on the laws in their particular state. Based on all of the aforementioned trends, Boenning & Scattergood has ranked the regulatory environment in the six states that have the majority of publicly traded water utility companies. The states are listed from most attractive to least attractive for "generat[ing] earnings growth and maximiz[ing] shareholder value."[56] Another way to look at the ranking is from less to more public oversight.

The regulatory environment in New Jersey is the most protective of the public's interests – something corporations see as a hindrance to their profits. Regulators in New Jersey do not allow private utilities to increase rates without a trial, and they do not encourage privatization by allowing corporations to charge extra high rates after taking over a disadvantaged system.

California is becoming increasingly corporate friendly – even beating out George Bush's home state of Texas – because regulation is weakening under the Water Action Plan of the California Public Utilities Commission.[57]

Although California is just beginning to give water corporations special privileges that increase their profits, this is nothing new in Pennsylvania. The state has a long history of friendly relations between company executives and the officials who regulate them. Boenning & Scattergood find that Pennsylvania's regulatory climate is the best for companies because the state considers corporate interests equal to community concerns: "In sum, Pennsylvania's well designed regulatory system positions the interests of investor owned utilities and their shareholders alongside — rather than subordinate to — those of other key stakeholders."[58]

In Their Own Words: Equity Research Firm Boenning & Scattergood, Inc. on State Regulation

Boenning & Scattergood's Water Digest directly connects a state's regulatory oversight to the profits of any water utility operating within that state, identifying states with regulatory regimes friendly to private ownership and management of water.

Much financial woe is in store for people across the country unless consumer-friendly changes are made to regulation that, at best, allows and, at worst, encourages wastewater companies to put profits ahead of the public interest. Indeed, we capture here quotes by an investment firm bragging about "ratepayers" and "stakeholders," both of which are code words for the public and consumers, subsidizing private profit.

Pennsylvania

"Rate cases rarely exceed nine months in duration, while granted rates of return regularly top 10.5% - a level rarely matched in other states."

"Pennsylvania pioneered the trend of allowing utilities to recover major infrastructure investments via temporary 'surcharges.'"

"[M]ajor regulated utilities in the state are unanimous in declaring that industry/regulator relations are amicable."

"Pennsylvania's "regulatory system positions the interests of investor owned utilities and their shareholders alongside – rather than subordinate to – those of other key stakeholders."

Delaware

"Boasting prompt rate cases and attractive granted rates of return on equity, Delaware's progressive regulatory climate is not far behind that of Pennsylvania."

Connecticut

"Connecticut utilities enjoy one of the nation's most expeditious regulatory environments, and this prompt handling of rate relief requests helps utilities to minimize the impact of regulatory lag on realized returns."

"Furthermore, Connecticut's [Department of Public Utility Control] has in place incentives for larger systems to purchase smaller, troubled systems, encouraging consolidation among the state's roughly 500 distinct water systems."

California

"Still, many grassroots California organizations exhibit strident resistance to private ownership of water assets, and these groups have the potential to hold back progress in improving the state's regulatory climate."

From a report by Boenning & Scattergood[144]

Given this, it should come as no surprise that Pennsylvania is home to Aqua America, the second largest publicly traded U.S. water company.[59] In fact, Aqua America, which still generates 55 percent of its revenue in the state, is even being given a voice in government policies. Gov. Edward Rendell has appointed the president of the company to the 30-member Sustainable Water Infrastructure Task Force that will advise the governor on addressing the state's infrastructure needs. The president of Pennsylvania American Water, subsidiary of American Water, the largest U.S. water corporation, also serves on the task force.[60]

Private Investors Shift Sights to Small Town Systems

Ten years ago, private water utilities enthusiastically bid to take over water systems of major U.S. cities, such as Atlanta and New Orleans. However, high profile failures, public opposition and increased scrutiny by elected officials contributed to a shift away from big cities and toward easier prey.

Investors believe they can cash in on the infrastructure crisis by taking over the thousands of small municipal utilities and local mom-and-pop operations that cannot afford the growing cost of making needed repairs and updates. Corporations pursue these aging systems – including the costly improvements that go along with them – not out of good will for the community, but because of their "mandate to grow and to maximize shareholder value."[61]

Aqua America is just one of several companies actively seeking to buy up water and sewer systems. Even outside of Pennsylvania, Aqua America enjoys "cordial relations with its regulators."[62] With these "strong regulatory relationships," and "this important constituency in its corner,"[63] Aqua America has become the industry leader in taking over and consolidating water systems through a process that can increase costs, hikes up families' water bills and results in more corporate profits.[64]

"When those higher water bills arrive, people will wish that someone had made Kentucky American do more about conservation years go," conjectured the editors of the Lexington Herald-Leader. "A government-owned utility has a much stronger incentive to keep rates down."

In the words of Boenning & Scattergood: "Utility boards are a powerful force in the water utility industry, and their influence is felt in nearly every aspect of the business – acquisitions being no exception."[65]

After companies take over a water system, they file for rate increases to recover the costs of the transaction and system improvements and maintenance – having friends on the utilities commission could only help speed along the process and get a greater amount approved – and then they consolidate systems and reduce costs. In this way, corporations use high initial costs to inflate people's water bills, and then they increase efficiency and cost savings to further maximize their earnings. People end up paying for costs that no longer exist, but the payments augment the company's profits.

This is exactly what a retired accountant for ExxonMobil accused Aqua America of doing in North Carolina when the company purchased his community's water system. Addressing the North Carolina Utilities Commission during a trial to establish water rates for Aqua's subsidiary Heater Utilities, the accountant said the company's strategy was to seek rate increases ahead of cost savings, so the customers wouldn't see any financial advantages. Meanwhile, "the stockholders of Aqua benefit from both the rate increase and the cost savings."[66]

During the same trial, Aqua was accused of inflating expenses by electing to report a stock transfer that increased the value of Heater by $2.5 million. This election would have increased the revenue that Aqua was seeking to re-

cover through rate increases by more than $300,000. The utilities commission agreed with the public that "[w]hile taking this election may benefit Aqua's stockholders, it adversely impacts Heater's ratepayers."[67]

Local governments usually do not want to lose public control of their water and wastewater systems, and officials face "strident resistance" when they consider selling their systems to a private utility, according to Boenning & Scattergood.[68] Since 1986 EPA has approved only 10 sales of federally funded public wastewater utilities and few, if any, substantial sales of publicly-owned drinking water systems to private companies.[69]

Even Boenning & Scattergood admit that the public has had a "few high-profile successes" in interfering with the privatization of their water system, "such as causing problems for European water behemoth RWE's California operation."[70]

Indeed, the residents of Felton, Calif., passed a referendum to raise $11 million in bonds to purchase its water system, but RWE refused to sell it to the town. The corporation sold some 40 percent of its U.S. subsidiary – America Water – in the U.S. stock market in April 2008. "If people are interested in buying into their water supply, they can buy shares in American Water after the IPO [initial public offering]," said Harry Roels, then chief executive of RWE.[71]

As a result, the town had to invoke eminent domain in its ongoing efforts to bring the system under public control. The company gave up the legal battle in March 2008, believing it had driven up the value of the system to a point where the town could no longer afford to buy it.[72] This haughty perspective, however, was short lived. Four days before a jury would determine the purchase price, the company settled and sold the system for $10.5 million,[73] more than halving what it originally claimed was the system's fair market value.[74]

"This is a huge victory for the citizens of Felton," said Jim Mosher, who headed up the legal battle of citizen group Felton FLOW, "and should inspire other communities to challenge private water utilities that are extorting huge, unjustified rate increases."[75]

Despite similar successes in many other communities – Cave Creek, Ariz.; Fort Wayne, Ind. and Knox, Penn., to name a few[76] – many industry analysts predict local governments will lose hold of their public water systems as repair and upgrade costs continue to mount.[77]

While the privatization of drinking water systems is the current hot trend, industry experts predict that sewer privatization will soon follow.[78] Large companies, including Aqua America, are already actively expanding into this sector.[79]

Why Corporations Oppose A Federal Trust Fund for Water Infrastructure

A federal trust fund for water and wastewater would help make necessary water infrastructure upgrades and keep prices affordable. However, corporations oppose it for two primary reasons:

1. **Reduced costs and water prices deflate corporate profits.**

   Investor owned utilities receive profit based on how much money they spend on infrastructure, and they cannot profit from what is given to them.[137] Federal funding decreases how much private utilities can spend and recover through water prices and thus how much they can receive as profit.

2. **Assistance to small public utilities strengthens resistance to corporate takeovers.[138]**

   Water companies also oppose what they call a "bail-out" for poor water and wastewater systems.[139] Without public funding, the infrastructure crisis will force many small public utilities to go under and sell their system to private companies. In these sales, the private utility would have the upper hand because of the great need of the local government.

   Many municipal systems resist being bought by large water corporations. Boenning & Scattergood admits that many communities do not want their water sold for profit: "In fact, many local stakeholders [also called community members] bristle at the very concept of their water system becoming a 'private, for profit' enterprise."[140]

   Therefore, companies usually only acquire public utilities that are cash-strapped and under hardship: "Such 'distress' purchases are a key driver of the industry's consolidation push."[141] Federal funding would allow public utilities to become viable and operate their systems in the interests of the public. With such support, the only acquisitions would be under more evenhanded and balanced terms, which do not bode as well for corporate profits.

   For the same reason, companies dislike any federal assistance that would allow local governments to retain ownership of their systems. As another of its four pillar of sustainable infrastructure, EPA has proposed *asset management* to help small utilities to effectively manage their systems and remain viable. According to Boenning & Scattergood, this assistance would allow small public utilities to avoid the "breaking point" of incredible hardships that would have forced the sale of their systems and thus to "avert takeover" by a private company.[142]

Public wastewater systems offer "considerable opportunities" for private investors, according to Boenning & Scattergood, partly due to the "lower level of political sensitivity to rate increases and privatization."[80] The firm believes that the public cares less about wastewater than about drinking water because it is not "*ingested* water."[81]

For corporations, another attractive feature of wastewater is its relatively low level of regulation. This is a key difference between water and wastewater systems: Many states do not oversee the prices that companies charge for sewer service. While 12 percent of states do not regulate for-profit drinking water utilities, three times as many, 36 percent, do not regulate wastewater companies.[82]

Sometimes cities within these states provide regulation, but often companies just have "greater flexibility in pricing" that can increase shareholder profits above and beyond that allowed by regulatory commissions.[83]

Full-Cost Pricing Sticks Ratepayers with Bigger Bills

As households pay higher water and wastewater prices, utilities see their income grow. In 2007, North America was the only region in the world where water utilities brought in more money from water bills than they spent to deliver the water.[84] Worldwide, water utilities charged prices that on average pay only half of their costs.[85] The rest is paid by outside funding, including government support that reduces the financial burden on households.

Because U.S. water and wastewater utilities have little federal funding, the Environmental Protection Agency advises utilities to set water and wastewater prices high enough to ensure that user bills pay the full cost of building, operating and managing their systems. This is called *full cost pricing*.[86] (See box on p. 7)

Already, 70 percent of drinking water utilities and 60 percent of wastewater utilities rely on local bills to pay the entire cost of providing service.[87] Yet, they are still failing to meet their infrastructure needs. If public drinking water and wastewater systems continue their current spending practices, they will neglect $225 billion of infrastructure needs from 2000 to 2019, according to EPA estimates.[88]

To pay for most of this gap, EPA recommends that utilities annually increase their spending by 3 percent over the rate of inflation.[89] Water and wastewater prices did increase by this amount in 2007,[90] so utilities should have had the extra funding to meet this goal and pay for more improvements. Higher prices, however, do not necessarily mean that utilities can spend more on their system because they are simultaneously losing other funding sources – federal grants and loans, for instance – that have traditionally supplemented revenue from community bills. That means communities may be paying higher prices to offset the loss of government assistance – not to make necessary improvements to their water and sewer systems.

Adhering to the principle of full cost pricing may be a reason that many utilities are failing to meet the needs of their aging systems. In order to achieve full cost pricing, expenses must not exceed revenue from user fees. So, when revenue falls short, many utilities must sacrifice needed infrastructure repairs and upgrades. Twenty-nine percent of utilities balance their books only by forgoing necessary maintenance.[91]

As federal funding evaporates and user bills become the sole source of revenue, water and wastewater utilities are facing the difficult choice to either go without necessary repairs or increase prices for communities that may not be able to afford them. High prices place a great burden on working class families, whose water and sewer bills already constitute a larger percentage of their income,[92] and who often live in older homes with outdated, inefficient plumbing and piping that waste water and drive up utility bills.[93]

Almost by definition, full cost pricing would increase water and wastewater prices, and for many families, it could restrict access to safe, affordable water. But it rewards private utilities for inefficient practices such as excessive expendi-

"Full-Cost Pricing" in the Water Industry

What It Is	Who Benefits
Concept of ensuring that all costs incurred in providing a reliable source of potable water (including sourcing, treatment and delivery) are reflected in usage fees.	Realization of full-cost pricing ideal would benefit virtually every corner of the industry, including utilities, meter providers and general infrastructure players.

Source: Boenning & Scattergood

tures on unnecessary equipment and infrastructure. That's why the pricing system will benefit "virtually every corner of the industry, including Utilities, Meter providers, and general Infrastructure players," according to Boenning & Scattergood.[94]

The investment firm acknowledges the great public opposition to full cost pricing that has stopped many municipally owned systems from implementing it. Publicly elected officials are responsive to their constituents and "push back on efforts to increase prices for basic services such as water."[95]

Advocates of full cost pricing believe that "a high-profile system failure would 'help' the situation" by changing public opinion on full cost pricing. If "faulty underground infrastructure were to interrupt a major city's water supply for an extended period," companies believe that the public would be less resistant to rate hikes that benefit corporations.[96]

Unfortunately, private utilities have not been able to forestall such disasters. United Water, a subsidiary of French multinational Suez, could not avoid it, and it is one of the largest water companies working in the United States. Despite full cost pricing, United Water could not prevent a break in a main water line that left more than 200,000 people without water in five of the most densely populated U.S. towns.[97]

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The Frontier of Water Investing

"It's hard to imagine anything more integral to our lives than water. It is the building block of our society and our very physiology. Wars have been fought over it, and great poets like Frost, Kipling and Emerson have penned tributes to it. But for investors, it may be the words of Benjamin Franklin that prove most prophetic – 'When the well is dry, we learn the true worth of water.'"

– David Twibell, president of Private Wealth Management for Colorado Capital Bank[129]

Water rights allow the legal private ownership of water resources.

As available water supplies dry out, corporations are increasingly interested in actually owning the right to use water. Water rights are considered the "frontier of water investing."[130] There are only a few companies that sell these rights, and they are just now seeking investors for their water supply. But these corporations eventually will make profit by selling their water to municipal water systems during times of need. Because of water ownership law, most water rights are owned in the West, where the value of water is expected to swell as it becomes increasingly scarce.[131]

One major holder of water rights is Cadiz, Inc., which owns the rights to the groundwater under more than 46,000 acres of land in Southern California. Because the land is near pipelines that are already in place, the company is in a good position to sell water to parched municipalities.[132] Cadiz has petitioned the Metropolitan Water District of Southern California for sale of water rights of "surplus water" from the Colorado River Aqueduct.[133,134] Meanwhile, Lake Mead, the river's natural reservoir, has a 50 percent chance of going dry by 2021.[135] If approved, the company would store this water in an underground aquifer only to sell it back to the district at a later date.[136]

During an early morning in February 2007, an aging pipeline ruptured and water flooded city streets and apartments in West New York, New Jersey. Dozens of people, including 14 children, were evacuated, some fleeing on rafts in the frigid water.[98]

Rich Henning, a spokesperson for United Water New Jersey, said that many of the pipelines were 70 to 80 years old and were in working condition, dismissively adding, "[T]his happened to be one where it was time to go."[99]

"One thing is clear," said Brian Stack, the mayor of Union City, where lack of water forced school closings. "They have to do repairs. They have to do maintenance. They can't just come and repair when they have a problem."[100]

United Water, however, wanted to recover the amount it spent over the preceding decade, and just two weeks after the water main broke, it announced a 28 percent rate hike.[101] Perhaps the company intended to delay repairs until it had secured its stockholder profits.

Private Utilities Are Inefficient and Waste Water

Not only do utilities have to upgrade infrastructure, they also must address another imminent disaster – water scarcity. The U.S. General Accounting Office found that 36 states expect severe water shortages in the next five years.[102]

The best way to address diminishing water supplies is conservation. For example, water conservation could cut water use in California by 20 percent over the next 25 years even as the state's population continues to grow,[103] even though many utilities are still pursuing their expensive desalination plans.

High water consumption not only drains water sources, but it also strains the treatment capacity, delivery system and conveyance network of water and wastewater systems. When water consumption increases to a certain level, utilities have to invest in new water sources, treatment plants and pipelines. By removing these expenses, water conservation can lower costs and offer relief to families with mounting water and sewer bills.

The private sector has "little incentive to 'get on board' with the EPA's water efficiency programs," according to Boenning & Scattergood.[104] A water company's profits depend on how much water is sold and how much is spent on the water system. Because water conservation reduces both the quantity of water used and the costs of operation, it decreases corporate profits. Instead, private utilities prefer expensive ways of either reclaiming water – sewage water recycling or desalination – or diverting it across long distances via pipelines.

Assessing EPA's Four Pillars of Sustainable Infrastructure

Because of a funding crisis, utilities are forgoing many needed repairs and improvements to their water and wastewater systems. To help utilities address these needs, EPA has proposed its "Four Pillars of Sustainable Infrastructure" (see chart for descriptions of each). Ken Kirk, the executive director of the National Association of Clean Water Agencies, refers to the proposal as the "four pillows" because "they're kind of soft." He believes that the initiative fails to address the funding gap.[124]

Nevertheless, each of the pillars will have distinctive impacts on community water bills and corporate profits.

EPA's Four Pillars of Sustainable Water Infrastructure[125]

Pillar	Description	Implications for communities	Outlook for private water utilities
Full Cost Pricing	User fees pay the entire cost of providing service.	No government funding. Increased water and wastewater prices.	Favorable. High costs mean high profits. Benefits the entire industry.
Water Efficiency	Water conservation, which could reduce water consumption by 20 percent.[126]	Lower system costs and thus lower water and wastewater prices.	Unfavorable. Low costs reduce profits.
Asset Management	Assistance for small systems to manage resources effectively, which could save around 10 percent on costs.[127]	Lower costs and prices. The public retains ownership of their systems – a "take over defense."	Unfavorable. Small systems remain viable. Reduced consolidation and privatization.
Watershed Approach	Pollution prevention with regional water management, which includes source water protection.	Lower treatment costs. Reduced water prices.	Unfavorable. Reduced need for expensive treatment methods. Lower costs and thus lower profits.[128]

Some corporations appear so resistant to water conservation that nothing short of a public takeover can get them to curtail their wasteful water use.

Albuquerque Bernalillo County Water Utility Authority, jointly with the city of Rio Rancho, New Mexico, is seeking to take over a privately owned water system for refusing to enact conservation measures to ensure it wouldn't deplete the regional aquifer. The public utility alleges that when asked to develop a water efficiency plan, New Mexico Utilities, a subsidiary of Southwest Water Systems – one the largest U.S. water corporations, serving more than 2 million people in 10 states – responded by petitioning the state to allow it to pump six times more water from the aquifer.

Calling the takeover a "last resort," the public officials accused Southwest Water of using too much water, being "irresponsible in its stewardship of a precious resource," damaging the local water supply and potentially costing the public water authority's own customers more than $50 million.[105] Without sustainable water use, the cost of extracting water can rise substantially for all utilities that rely on the same aquifer.

Indeed, a private utility's wasteful practices don't harm just the people it serves; they can impact water availability for all the communities that share a water source.

In order for private utilities to implement conservation programs that could decrease their profits, companies want some sort of compensation — either revenue guarantees or a tiered pricing system that allows higher rates.

Under a revenue guarantee system, the private utility would receive "make-up payments" to offset lost earnings due to conservation. These payments would come from the very households that are making the good decision to conserve water.[106] But why would households continue to conserve water if they are going to have to pay for the water that they no longer use?

If not guaranteed revenue, companies want to charge higher rates for the amount of water used at higher volumes. Currently, only 11.5 percent of all water systems use this tiered pricing structure (called an increasing block rate). Most water systems charge the same price per gallon no matter how many gallons are used.[107]

According to the Boenning & Scattergood, the tiered pricing scheme would make "a market-based approach more palatable" to communities because it makes high water users pay more for their high consumption.[108] But it also places the burden of conservation on the household – not the utility.

As of yet, regulators do not allow revenue guarantees or the tiered pricing system. And investors are concerned that there is "no program in place to 'compensate'" companies that have to implement conservation programs.[109] In places with water efficiency plans, including South Central Pennsylvania, water companies are seeing declines in per capita water usage and consequently their profits.

Nevertheless, corporations are not worrying too much about conservation because "regulators are unlikely to allow water utilities to become 'victims' of the conservation movement."[110] Corporations, in fact, are saved by other regulatory requirements – including the increasingly demanding water quality requirements that can necessitate huge expenditures on new treatment plants.[111]

Conclusions

The U.S. water and sewer infrastructure is aging and in need of repairs. And things are only expected to grow worse over the next few years.

Unfortunately, cities are finding that federal assistance is drying up, leaving them to face these expensive problems alone. As a consequence, households around the country will have to pay thousands of more dollars over the coming decades.

But even with money from higher water and sewer rates, many utilities just do not have enough money to pay the enormous costs of these necessary improvements. The best answer for rejuvenating our water infrastructure is a federal trust fund, something that an overwhelming majority of the public supports.

Despite this, many in government and the private sector oppose such a trust fund and, instead, are pushing privatization and ever-higher rates for consumers.

Contrary to their claims, private water utilities are not more efficient, do not decrease costs and strive for profits above all else. Indeed, the water barons have a financial incentive to drive up the already high costs of infrastructure improvement.

Across the nation, local governments are implementing water conservation programs to reduce wasteful water usage, and they are working together to protect the lakes, rivers and aquifers that are the source of the residents' drinking water. Both these practices, scorned by many private operators, are helping to offset the financial burden of their crumbling infrastructure.

While public utilities are making many efforts to repair and improve their water and wastewater systems, the problem is too big for them alone.

To keep the nation's municipal systems strong, Congress must take action. The country needs a federal trust fund for drinking water and wastewater.

This funding must not be available to water and wastewater corporations. Private utilities have a financial incentive to be wasteful and inefficient. They could try to offset any cost savings of federal funding through excessive expenditure, and communities might not see any benefit when their tax dollars go to water and sewer corporations.

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