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The Race to Buy Up the World's Water

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Sitka, Alaska, is home to one of the world's most spectacular lakes. Nestled into a U-shaped valley of dense forests and majestic peaks, and fed by snowpack and glaciers, the reservoir, named Blue Lake for its deep blue hues, holds trillions of gallons of water so pure it requires no treatment. The city's tiny population—fewer than 10,000 people spread across 5,000 square miles—makes this an embarrassment of riches. Every year, as countries around the world struggle to meet the water needs of their citizens, 6.2 billion gallons of Sitka's reserves go unused. That could soon change. In a few months, if all goes according to plan, 80 million gallons of Blue Lake water will be siphoned into the kind of tankers normally reserved for oil—and shipped to a bulk bottling facility near Mumbai. From there it will be dispersed among several drought-plagued cities throughout the Middle East. The project is the brainchild of two American companies. One, True Alaska Bottling, has purchased the rights to transfer 3 billion gallons of water a year from Sitka's bountiful reserves. The other, S2C Global, is building the water-processing facility in India. If the companies succeed, they will have brought what Sitka hopes will be a \$90 million industry to their city, not to mention a solution to one of the world's most pressing climate conundrums. They will also have turned life's most essential molecule into a global commodity.

The transfer of water is nothing new. New York City is supplied by a web of tunnels and pipes that stretch 125 miles north into the Catskills Mountains; Southern California gets its water from the Sierra Nevada Mountains and the Colorado River Basin, which are hundreds of miles to the north and west, respectively. The distance between Alaska and India is much farther, to be sure. But it's not the distance that worries critics. It's the transfer of so much water from public hands to private ones. "Water has been a public resource under public domain for more than 2,000 years," says James Olson, an attorney who specializes in water rights. "Ceding it to private entities feels both morally wrong and dangerous."

Everyone agrees that we are in the midst of a global freshwater crisis. Around the world, rivers, lakes, and aquifers are dwindling faster than Mother Nature can possibly replenish them; industrial and household chemicals are rapidly polluting what's left. Meanwhile, global population is ticking skyward. Goldman Sachs estimates that global water consumption is doubling every 20 years, and the United Nations expects demand to outstrip supply by more than 30 percent come 2040.

Proponents of privatization say markets are the best way to solve that problem: only the invisible hand can bring supply and demand into harmony, and only market pricing will drive water use down enough to make a dent in water scarcity. But the benefits of the market come at a price. By definition, a commodity is sold to the highest bidder, not the customer with the most compelling moral claim. As the crisis worsens, companies like True Alaska that own the rights to vast stores of water (and have the capacity to move it in bulk) won't necessarily weigh the needs of wealthy water-guzzling companies like Coca-Cola or Nestlé against those of water-starved communities in Phoenix or Ghana; privately owned water utilities will charge what the market can bear, and spend as little as they can get away with on maintenance and environmental protection. Other commodities are subject to the same laws, of course. But with energy, or food, customers have options: they can switch from oil to natural gas, or eat more chicken and less beef. There is no substitute for water, not even Coca-Cola. And, of course, those other things don't just fall from the sky on whoever happens to be lucky enough to be living below. "Markets don't care about the environment," says Olson. "And they don't care about human rights. They care about profit."

In the developed world—America especially—it's easy to take water for granted. Turn on any tap, and it comes rushing out, clean and plentiful, even in the arid Southwest, where the Colorado River Basin is struggling through its 11th year of drought; in most cities a month's supply still costs less than premium cable or a generous cell-phone plan. Many of us have no idea where our water comes from, let alone who owns it. In fact, most of us would probably agree that water is too precious for anybody to own. But the rights to divert water—from a river or lake or underground aquifer—are indeed sellable commodities; so too are the plants and pipes that process that water and deliver it to our taps. And as demand outstrips supply, those commodities are set to appreciate precipitously. According to a 2009 report by the World Bank, private investment in the water industry is set to double in the next five years; the water-supply market alone will increase by 20 percent.

Unlike the villain in James Bond's *Quantum of Solace* who hatched a secret plot to monopolize Bolivia's fresh-water supply, the real water barons cannot be reduced to a simple archetype. They include a diverse array of buyers and sellers—from multinational water giants like Suez and Veolia that together deliver water to some 260 million taps around the world, to wildcatter oil converts like T. Boone Pickens who wants to sell the water under his Texas Panhandle ranch to thirsty cities like Dallas. "The water market has become much more sophisticated in the last two decades," says Clay Landry, director of WestWater Research, a consulting firm that specializes in water rights. "It's gone from parochial transactions—back-of-the-truck, handshake—type deals—to a serious market with increasingly serious players."

Eventually, Olson worries, every last drop will be privately controlled. And when that happens, the world will find itself divided along a new set of boundaries: water haves on one side, water have-nots on the other. The winners (Canada, Alaska, Russia) and losers (India, Syria, Jordan) will be different from those of the oil conflicts of the 20th century, but the bottom line will be much the same: countries that have the means to exploit large reserves will prosper. The rest will be left to fight over ever-shrinking reserves. Some will go to war.

Until recently, water privatization was an almost exclusively Third World issue. In the late 1990s the World Bank infamously required scores of impoverished countries—most notably Bolivia—to privatize their water supplies as a condition of desperately needed economic assistance. The hope was that markets would eliminate corruption and big multinationals would invest the resources needed to bring more water to more people. By 2000, Bolivian citizens had taken to the streets in a string of violent protests. Bechtel—the multinational corporation that had leased their pipes and plants—had more than doubled water rates, leaving tens of thousands of Bolivians who couldn't pay without any water whatsoever. The company said price hikes were needed to repair and expand the dilapidated

infrastructure. Critics insisted they served only to maintain unrealistic profit margins. Either way, the rioters sent the companies packing; by 2001, the public utility had resumed control.

These days, global water barons have set their sights on a more appealing target: countries with dwindling water supplies and aging infrastructure, but better economies than Bolivia's. "These are the countries that can afford to pay," says Olson. "They've got huge infrastructure needs, shrinking water reserves, and money."

Nowhere is this truer than China. As the water table under Beijing plummets, wells dug around the city must reach ever-greater depths (nearly two thirds of a mile or more, according to a recent World Bank report) to hit fresh water. That has made water drilling more costly and water contracts more lucrative. Since 2000, when the country opened its municipal services to foreign investment, the number of private water utilities has skyrocketed. But as private companies absorb water systems throughout the country, the cost of water has risen precipitously. "It's more than most families can afford to pay," says Ge Yun, an economist with the Xinjiang Conservation Fund. "So as more water goes private, fewer people have access to it."

In the U.S., federal funds for repairing water infrastructure—most of which was built around the same time that Henry Ford built the first Model T—are sorely lacking. The Obama administration has secured just \$6 billion for repairs that the EPA estimates will cost \$300 billion. Meanwhile, more than half a million pipes burst every year, according to the American Water Works Association, and more than 6 billion gallons of water are lost to leaky pipes. In response to the funding gap, hundreds of U.S. cities—including Pittsburgh, Chicago, and Santa Fe, N.M.—are now looking to privatize. On its face, the move makes obvious sense: elected officials can use the profits from water sales to balance city budgets, while simultaneously offloading the huge cost of repairing and expanding infrastructure—not to mention the politically unpopular necessity of raising water rates to do so—to companies that promise both jobs and economy-stimulating profits.

Of course, the reality doesn't always meet that ideal. "Because water infrastructure is too expensive to allow multiple providers, the only real competition occurs during the bidding process," says Wenonah Hauter, executive director of the nonprofit, anti-privatization group Food and Water Watch. "After that, the private utility has a virtual monopoly. And because 70 to 80 percent of water and sewer assets are underground, municipalities can have a tough time monitoring a contractor's performance." According to some reports, private operators often reduce the workforce, neglect water conservation, and shift the cost of environmental violations onto the city. For example, when two Veolia-operated plants spilled millions of gallons of sewage into San Francisco Bay, at least one city was forced to make multimillion-dollar upgrades to the offending sewage plant. (Veolia has defended its record.)

Even as many U.S. cities look toward ceding their water infrastructure to private interests, others are waging expensive legal battles to get out of such contracts. In 2009 Camden, N.J., sued United Water (an American subsidiary of the French giant Suez) for \$29 million in unapproved payments, high unaccounted-for water losses, poor maintenance, and service disruptions. In Milwaukee a state audit found that the same company violated its contract by shutting down sewage pumps to save money; the move resulted in billions of gallons of raw sewage spilling into Lake Michigan. And in Gary, Ind., which canceled its contract with United Water after 12 years, critics say privatization more than doubled annual operating costs. "It ends up being a roundabout way to tax people," Hauter says. "Only it's worse than a tax because they don't spend the money maintaining the system."

Representatives of United Water point out that 95 percent of its contracts are in fact renewed and say that a few bad examples don't tell the whole story. "We are dealing with facilities that were designed and built at the end of World War II," says United Water CEO Bertrand Camus. "We have plenty of horror stories on our side, too." The Gary facility, to take one example, went private only after the EPA forced the public utility to find a more experienced operator to solve a range of problems. "Individual municipalities don't have the expertise to employ all the new technology to meet the new standards," Camus says. "We do."

The bottom line is this: that water is essential to life makes it no less expensive to obtain, purify, and deliver, and does nothing to change the fact that as supplies dwindle and demand grows, that expense will only increase. The World Bank has argued that higher prices are a good thing. Right now, no public utility anywhere prices water based on how scarce it is or how much it costs to deliver, and that, privatization proponents argue, is the root cause of such rampant overuse. If water costs more, they say, we will conserve it better.

The main problem with this argument is what economists call price inelasticity: no matter what water costs, we still need it to survive. So beyond trimming nonessential uses like lawn maintenance, car washing, and swimming pools, consumers really can't reduce water consumption in proportion to rate increases. "Free-market theory works great for discretionary consumer purchases," says Hauter. "But water is not like other commodities—it's not something people can substitute or choose to forgo." Dozens of studies have found that even with steep rate hikes, consumers tend to reduce water consumption by only a little, and that even in the worst cases, the crunch is disproportionately shouldered by the poor. In the string of droughts that plagued California during the 1980s, for example, doubling the price of water drove household consumption down by a third, but households earning less than \$20,000 cut their consumption by half, while households earning more than \$100,000 reduced use by only 10 percent.

In fact, critics say, private water companies usually have very little incentive to encourage conservation; after all, when water use falls, revenue declines. In 2005 a second Bolivian riot erupted when another private water company raised rates beyond what average people could afford. The company had dutifully expanded the city's water system to several poor neighborhoods outside the city. But the villagers there, accustomed to life without taps, were obsessive water conservers and hadn't used enough water to make the investment profitable.

The biggest winners of a sophisticated water market are likely to be the very few water-rich regions of the global north that can profitably move massive quantities across huge distances. Russian entrepreneurs want to sell Siberian water to China; Canadian and American ones are vying to sell Canadian water to the Southwestern U.S. So far, such bulk transfers have been impeded by the high cost of tanker ships. Now, thanks to the global recession, the tankers' rates have dropped significantly. If the Sitka plan succeeds, other water-rich cities may soon follow.

But in between the countries that will profit from the freshwater crisis, and those that will buy their way out of it, are the countries that have neither water to sell nor money with which to buy it. In fact, if there's one thing water has in common with oil, it's that people will go to war over it. Already, Pakistan has accused India of diverting too much water from rivers running off the Himalayas; India, in turn, is complaining that China's colossal diversion of rivers and aquifers near the countries' shared border will deprive it of its fair share; and Jordan and Syria are bickering over access to flows from a dam the two countries built together.

So what do we do? On the one hand, most of the world views water as a basic human right (the U.N. General Assembly voted unanimously to affirm it as such this July). On the other, it's becoming so expensive to obtain and supply that most governments cannot afford to shoulder the cost alone. By themselves, markets will never be able to balance these competing realities. That means state and federal governments will have to play a stronger role in managing freshwater resources. In the U.S., investing as much money in water infrastructure as the federal government has invested in other public-works projects would not only create jobs but also alleviate some of the financial pressure that has sent so many municipal governments running to private industry. That is not to say that industry doesn't also have a role to play. With the right incentives, it can develop and supply the technology needed to make water delivery more cost-effective and environmentally sound. Ultimately both public and private entities will have to work together. And soon. Unless we manage our water better now, we will run out. When that happens, no pricing or management scheme in the world will save us.