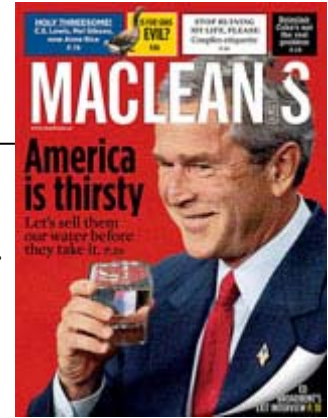


# America is Thirsty

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**They're already looking for ways to take our water.  
We should tone down the emotion and figure out how to sell it to them.**

STEVE MAICH  
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On the border between Nevada and Arizona sits Lake Mead, the biggest man-made reservoir in the United States, created when the Hoover Dam was built in the 1930s. It is the shimmering oasis that makes urban life possible in the middle of the bleached desert landscape of the Mojave. It's also the epicentre of North America's burgeoning water crisis.

All around the 880 km of Mead's rocky shoreline, a bright white calcium deposit, known to locals as the bathtub ring, marks a high water level that is a quickly fading memory. Drought has dropped the surface of the lake 20 m below the bathtub ring over the past five years. Boulder Beach, once a popular day trip destination for nearby residents, is now about 300 m from the water's edge. The boat launch and fuel pumps of what used to be a marina are abandoned in the middle of what now looks like a parking lot. The marina and its luxury yachts chased the water to a new location a couple of miles down the road more than a year ago.

It would all seem funny if it weren't so scary. Lake Mead is the principal source of drinking water for the Las Vegas valley -- the fastest growing urban area in the United States. In all, more than three trillion gallons of water have disappeared due to drought, evaporation and overuse in five years, raising profound questions about the sustainability of growth in the U.S. southwest. The Colorado River, which not only feeds Lake Mead but also drives the turbines of the Hoover Dam, is a critical source of drinking water and power for much of southern California and Arizona. And between 2000 and early 2005, its flow dropped by almost half.

Las Vegas has responded with some of the most aggressive water conservation measures on the continent. Every drop of indoor water is treated and either reused for irrigation or returned to the Colorado. Strict limits are placed on all outdoor spraying, and the water authority pays homeowners US\$1 per square foot to pull up lawn grass and replace it with less thirsty desert vegetation. All this helps, but it doesn't fix a thing. "This drought has been a huge wake-up call," says Patricia Mulroy, head of the Southern Nevada Water Authority. "But conservation alone cannot solve the problem. If we continue to grow as we have, at some point we simply need more water in the system." That's why Las Vegas is steaming ahead with a highly controversial plan to build a US\$2-billion, 400-km pipeline to transport groundwater from the northern part of the state to slake the thirst of a city whose population is expected to double over the next decade.

The problems facing Las Vegas are part of a developing crisis slowly tightening its grip on much of the world. As the global population grows and developing economies expand, the demand for safe, secure water will accelerate just as it has in the fastest-growing pockets of the U.S. In response, much of the world is embracing the need for large-scale water trade and transport, just as Las Vegas has. Last year, Turkey and Israel finalized a deal to ship 50 billion litres a year from the Manavgat River to help supply Israel's growing population and agricultural needs. Several countries, including Greece and Cyprus, already import water and more are making plans and striking deals to ensure their farms and cities continue to thrive. North America is no exception. Engineers agree that, if Nevada can pipe water 400 km south, eventually it could pipe it all the way from the Canadian border.

But Canada, the most water-rich nation on the planet, wants no part of this new world. And that puts our priorities on a collision course with the needs of our biggest trading partner and most essential ally. Already the White House has mused about the need to open the Canada-U.S. border to water exports, and dozens of communities are lining up to reform a 96-year-old treaty that limits the amount drawn from the Great Lakes. This country is in a position to provide a solution that would yield enormous economic and humanitarian benefits for the entire continent, even the world. For now, though, the forces aligned against trade in water are firmly in control. A 2002 survey by the Centre

for Research and Information on Canada found that 69 per cent of Canadians are opposed to water exports, and Ottawa has obediently bowed to public pressure, instituting a blanket ban on exports from boundary waters three years ago. That was a politically savvy move at the time, but the day may be coming when Canada will face an even starker choice: sell, or see its most vital resource siphoned off from the south.

The first hint of water tension surfaced in 2001, when U.S. President George W. Bush made an offhand comment that he'd like to begin discussions with Ottawa about a framework for international trade in water to alleviate shortages. Canadian reaction was swift, shrill and unequivocal: "We're absolutely not going to export water, period," then-environment minister David Anderson said. The issue quickly faded from the headlines, but not from the public consciousness. Whether it's inherent distrust of corporations, latent anti-Americanism, or simple fear of ecological destruction, Canadians recoil at the very thought of treating water like oil or natural gas, or any of the other commodities that form the bedrock of the Canadian economy. In the words of Maude Barlow, national chairperson of the Council of Canadians and the country's leading water crusader, "Water is part of the Earth's heritage and must be preserved in the public domain for all time. Instead of allowing this vital resource to become a commodity sold to the highest bidder, we believe that access to clean water is a fundamental human right."

But even if that's true, and water is not a commodity like any other, then it's a right being denied to much of the world's population, even in rich countries. All across the U.S., communities are drying out. Drought has cut the flow of the Missouri River by a third, and intensive farming in the Midwest has substantially drained the enormous Ogallala aquifer that stretches from South Dakota to Texas. Even in northern climates like Wisconsin and Illinois, residents are dealing with dry wells that have failed to keep pace with soaring demand. When the U.S. government surveyed the 50 states in 2003, more than two-thirds said they expect to face some sort of water shortage within the next 10 years. The situation is even worse in the developing world. The United Nations estimates that by 2025, two-thirds of the world population, or almost 5.5 billion people, will face chronic water shortages, and scientists expect global warming will only make things worse.

In this context, Canada is a country of unbelievable water wealth. This country boasts more than 20 per cent of the world's fresh water, and the flow of rain, spring water, and snowmelt that courses through our waterways represents seven per cent of the planet's renewable water supply -- all to satisfy the needs of just 0.5 per cent of the world's population. This fundamental gap between global demand and Canada's ready supply has already attracted several business consortiums over the past two decades with plans to skim lake water for export. A couple even managed to garner the support of provincial governments in Newfoundland and Ontario in the 1990s, but those plans were quickly scuttled by public outcry and federal intervention.

But as the global water crisis deepens over the next two decades, this country's intransigence will prove increasingly difficult to maintain. Canada is offside even the UN's position on the matter. In 1997, the UN said that international water markets and trade are likely the only way to alleviate chronic shortages worldwide, while discouraging water waste in areas where it's plentiful. But it's not just a humanitarian issue: there is an enormous commercial opportunity and economic imperative at stake. If Canada insists on opting out of international water trade, that decision will almost surely do severe damage to the country's economy and standard of living.

Water is "liquid fuel for growth," says Robert Glennon, a professor of law at the University of Arizona, and one of the world's leading authorities on water policy. Just as human beings can't survive without moisture, economies can die of thirst. And if the U.S. economy continues to be plagued with shortages, the implications for Canada's No. 1 export market will be devastating. "Water is no longer perceived as a gift from God, but a commodity for which one has to pay," says Dr. Isabel Al-Assar, an international trade expert based at the University of Dundee, Scotland. "Water will become like oil one day, I have no doubt about it."

If Al-Assar is right, then Canada, through a miraculous stroke of lucky geography, is sitting on a liquid gold mine. Pinpointing exactly how much Canada could reap by selling fresh water depends heavily on a long list of questions: what price would buyers be willing to pay? How would it be transported? How much could be safely withdrawn without damaging sensitive ecosystems? But in 2001, the Frontier Centre for Public Policy, a Winnipeg-based think tank, constructed a theoretical business model showing that if Manitoba could sell 1.3 trillion gallons of water per year (roughly the amount that drains from provincial rivers into Hudson Bay in only 17 hours) at the same price charged for desalinated sea water in California, the province could reap annual profits of close to \$4 billion. In 1992,

the World Bank estimated that worldwide trade in water could be worth US\$1 trillion within the next generation. Even the opponents of water trade acknowledge that much of that market could belong to Canada.

The alternative is not pretty. As water shortages worsen around the world, increasing attention is sure to focus on Canada's water usage, and this country has a woeful story to tell. Canada has already been singled out by the Organization for Economic Co-operation and Development as one of the world's most profligate wasters of water. On a per capita basis, Canadians consume 1.6 million litres of water a year -- twice as much as people in France and four times as much as the average Swede. The vast majority of that is lost through primitive irrigation techniques in the agriculture industry, but personal waste is also a major culprit. And we're getting worse, while most of the world is learning to be more responsible. Between 1980 and 1999, Canada's total water use rose by 25.7 per cent, while water consumption in the U.S. declined over the same period. Several experts have suggested that the abundance of water in Canada and the fact that Canadians pay little for access to it has contributed to a culture of waste. And if the country refuses to share its water wealth in the decades ahead, it's not hard to anticipate the reaction around the world. Canada will look like the neighbour who leaves his sprinkler on all night while the rest of the street dies of thirst.

A tarnished reputation, however, is the least of Canada's concerns. Already, pressure is building in the U.S. to tap new sources of water, and replace supplies depleted through years of intensive farming, population sprawl and explosive economic growth. And as George W. Bush hinted four years ago, Canada is seen as the logical solution to the looming crisis. "I predict that the United States will be coming after our fresh water aggressively within three to five years," former Alberta premier Peter Lougheed wrote in a recent article for the Globe and Mail. "I hope that when the day comes, Canada will be ready."

If water is indeed to become a flashpoint in Canada-U.S. relations, the Great Lakes are almost sure to provide the spark. The importance of the lakes to both countries is obvious. They collectively supply drinking water to more than 45 million people and irrigation for a quarter of Canada's agriculture, and they provide the lifeblood of the industrial economies in Ontario, Quebec, New York, Michigan, and Illinois. But vast as they are, the lakes are fragile. They were created by receding glaciers, and only about one per cent of their volume is replenished by rainfall each year, which means substantial withdrawals from the system have far-reaching impacts.

Already, the City of Chicago pulls more than two billion gallons of water a day from Lake Michigan and flushes it into a sanitary and shipping channel that drains into the Mississippi River. Although the U.S. Supreme Court has capped the amount of water the city can withdraw, most experts agree little can be done if Chicago decides to increase its take to satisfy a population expected to grow by 30 per cent in the next 20 years. And Chicago isn't the only community clamouring to tap the enormous bounty of the Great Lakes. Several counties that currently straddle the watershed in Wisconsin and Illinois have petitioned to get access to lake water to shore up dwindling groundwater supplies, and environmentalists worry that if they get access, it could open the door to a never-ending escalation of demands from further and further afield.

Provincial and state governments are currently negotiating a deal that would place limits on transfers of water out of the watershed. But even if it is approved, the agreement would be non-binding, and the International Joint Commission that administers border waters has already received a legal opinion saying that the states and provinces do not have the authority to prohibit transfers of water to other parts of the country. Similar demands have recently bubbled up in the West, with U.S. communities demanding greater access to cross-border water supplies, including the Souris, Milk, and St. Mary's rivers.

The vulnerability of Canada's southern watersheds was highlighted by the recent Devil's Lake controversy, in which North Dakota diverted potentially dangerous lake water into the Red River system that drains into Manitoba. Canadian officials complained but were ultimately powerless to stop the diversion, which many fear will have serious consequences for the health of Lake Winnipeg. The lesson was that Canada's water systems can only really be protected through co-operation, not litigation. If Canada chooses to fight rather than share, legal experts agree there is little to stop the U.S. from abandoning the border waters treaty. As Adèle Hurley, director of the program on water issues at the Munk Centre for International Studies, has said, "It seems likely that the U.S. will act aggressively to ensure its water security." And if that determination were to result in large-scale diversions from the Great Lakes, or intensive mining of underground aquifers that straddle the border, the effect would be like dozens of giant straws draining the lifeblood of Canada's environment and economy.

Still, the vast majority of Canadians would prefer to keep fighting with tighter controls, and more ironclad assurances that Ottawa will never allow water to flow across the border, rather than facing up to the irresistible forces of supply and demand now shaping the world order in water. Even Lougheed, one of the staunchest proponents of the Canada-U.S. Free Trade Agreement, recently came out against water trade. "We Canadians should be prepared to respond firmly with a forceful 'No. We need it for ourselves,'" Lougheed wrote.

Many of the objections, however, are based on misinformation. Most Canadians, for example, believe Canada has no water to spare - despite the fact that, of the 18 principal watershed systems in Canada, 15 are currently providing less than 10 per cent of their annual renewable supplies to human uses, according to StatsCan. There is also a widespread belief, fostered by anti-trade activists, that if Canada were to agree to sell any portion of its water, the U.S. could demand unlimited access to the resource under NAFTA. But several legal opinions have debunked this notion. The University of Arizona's Glennon points out that NAFTA and the General Agreement on Tariffs and Trade both include specific passages allowing countries to limit trade in any good to safeguard threatened ecosystems or to protect human health. Both treaties also state that countries can limit trade to conserve exhaustible natural resources.

Nevertheless, ultra-nationalists like Barlow continue to play on Canadians' fears of losing control and ending up dry. To the critics of water trade, deficits in the rest of the world are simply not Canada's problem to solve. In this country, stories of U.S. water shortages conjure images of golf courses in the desert, and evoke little sympathy. Andrew Nikiforuk, Toronto-based author of *Political Diversions: Decision Time on Taking Water from the Great Lakes*, and a vocal opponent of water trade, puts it bluntly. "As for the water crisis in the Southwest, tell them to move," he says.

That kind of talk rankles Dr. Dale Devitt, a soft-spoken professor of soil and water at the University of Nevada Las Vegas, who has spent most of his career studying the science behind Nevada's water challenges. He advises the region on ways to conserve water, and is working with companies to find ways to reduce the amount needed to support plant life in the desert. "It's easy for people to criticize and say we don't use our water well," he says. "But people in the north rely on heating oil to survive winter. People in Florida and Louisiana get hit regularly by hurricanes, and in Oklahoma by tornados. Here we have problems with water -- but every place has natural challenges to overcome."

As far as Devitt is concerned, water markets are the only way that the profound gaps in water supply will be solved. New technologies in water filtration and desalinization will help, he says, but only by allowing water to flow freely will the world ensure that all those who need water get it, and all those who have it, use it responsibly. "I hope that marketing of water will happen at some point," he says. "Because it's only going to get tougher. If we think things are tight right now, wait 10 or 20 years. It's going to get downright nasty."

To proponents like Devitt, Glennon and Al-Assar, the status quo is as hypocritical as it is unsustainable. If it's okay to use water to irrigate crops that are then shipped across national borders; if it's okay to bottle millions of litres a year for sale in corner stores around the world; if it's okay to divert water to make steel or refine oil that is then shipped across national borders, then why not the water itself?

Pat Mulroy agrees, but she isn't holding her breath waiting for Canadian exports to quench her region's considerable thirst. "People are irrational when it comes to water. They get very emotional about it, and that's not going to change." For now, she and scientists like Devitt keep working to stretch what they have and delay that day of reckoning, when there simply isn't enough water to go around. And while they look to the skies and hope for a little relief, Canada's treasure of Blue Gold stays safely locked away from those who might sell it, and those who might drink it.

1. What's happening to Lake Mead and the Colorado River?
2. What are authorities in Las Vegas doing to promote responsible uses of water?
3. Where else in the world is water supply becoming an important issue?
4. What is the opposition to Canada selling its freshwater like other commodities?
5. What arguments could be made in favour of Canada selling its water abroad?
6. Describe Canada's per capita water usage. What AND WHY should we be doing about that?
7. What's stopping the U.S. from tapping into our shared water resources like the Great Lakes?
8. What does the future hold for Canadian water?!