

DRILLING for WATER

in the **MOJAVE**

BY CHRISTOPHER D. COOK

ILLUSTRATIONS BY JOHN HENDRIX

“If growth continued, the population and the water would fall hopelessly out of balance. Everyone was living off tens of thousands of years of accumulated water, like a spendthrift heir squandering his wealth. No one knew how much groundwater lay beneath the basin or how long it could be expected to last, but it would be insane to build the region’s future on it.”

—Marc Reisner, *Cadillac Desert*

The sun-seared Mojave Desert serves up some of Earth’s hottest summer days, firing the mercury above 120 degrees; just four inches of rain trickle from these unforgiving skies each year. In this parched beige moonscape there’s not much room for error. A stroll in the wrong direction without enough water can spell death.

There are other, human-induced perils. Sucking too much groundwater from a desert aquifer, for instance, can choke life-sustaining mountain springs and lead to massive dust storms by drawing down the water table and turning topsoil to sand. But that could take hundreds of years, in which time water entrepreneur Keith Brackpool might amass a fortune for his heirs, and the thirsts of agribusiness, developers, and lawn-hungry homeowners and golfers would be slaked, at least for a while.

In this time of corporate upheaval, and on the heels of California’s energy deregulation fiasco, it may seem odd to find the nation’s biggest public water wholesaler poised to privatize a chunk of Southern California’s water supply, at considerable public

expense. At least there will be no Enron or WorldCom accounting shockers: The financials for budding water privateer Cadiz, Inc., of which Brackpool is C.E.O., already show a business in serious trouble. The company is posting heavy losses (\$26.7 million last year), and its stock is plunging. The firm runs a 20,000-acre statewide farming operation but has no experience in the water business. Yet Cadiz is slated for a precedent-setting fifty-year, \$500 million water mining and storage project that government scientists and environmentalists say could cause irreparable damage to the Mojave Desert.

In the West’s latest water war, Brackpool has been lavishing hundreds of thousands of dollars on California Governor Gray Davis and prominent state legislators, and putting powerful politicians such as former Interior Secretary Bruce Babbitt on his payroll, to win a huge for-profit water contract. It would be the first private water sale to the giant Metropolitan Water District of Southern California (a.k.a. “the Met”), which serves 240 communities, including Los Angeles and San Diego.

Despite strenuous opposition from environmentalists and California Senator Dianne Feinstein, the Department of the Interior gave the project its blessing August 29 and placed no limits on groundwater extraction. Now, even as Feinstein pushes legislation that could halt the project, the Met’s directors are weighing their final decision on a project the Met has already spent \$3.5 million developing.

The Met would pay Cadiz to store surplus Colorado River water in underground basins during wet years, then pump it back in dry years, along with 1.5 million acre-feet of indigenous desert groundwater from an aquifer that lies beneath both company and federal land. The water would travel via pipeline into the Met’s sprawling aqueducts to the agency’s seventeen million consumers. To do this, Cadiz and the Met must build a thirty-five-mile underground pipeline (they would split the \$150 million cost) and accompanying power lines through federal desert land, as well as 400 acres of outdoor “spreading ponds” to hold the Colorado River water until it seeps into the aquifer.

The degree of damage depends largely on how much profit Cadiz seeks to mine from the aquifer. While the Met would pay \$90 per acre-foot to store and retrieve Colorado River

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water, the agency would fork over about \$230 per acre-foot for Cadiz aquifer water. (An acre-foot contains 325,872 gallons.) The more groundwater Cadiz sells, the more money it makes. But, argues Sierra Club water resource consultant David Czamanske, "The environmental communities say the water isn't there, and if you try to do it you'll draw down the aquifer, endangering the wildlife in the surrounding area."

To turn a profit, Cadiz may need to drain the aquifer far more rapidly than it can be replenished. The Met has already agreed to buy 30,000 acre-feet (more than ten billion gallons) of Cadiz groundwater per year—six times the amount government scientists say the aquifer can withstand without being severely depleted. The project could ultimately threaten desert wildlife such as the Mojave fringe-toed lizard, bighorn sheep, and the endangered desert tortoise.

Deserts appear rugged and lifeless at a glance, but the rich plant and animal life in them depends on a delicate ecosystem. The Mojave is particularly fragile. It's one of the ten most endangered parks and preserves in the nation, according to the National Parks Conservation Association.

"If Cadiz decides to put no limit on the amount that they end up removing from this aquifer, you could not only end up with an even drier desert, which means death to a lot of flora and fauna, but a pretty horrific air pollution problem" from dust storms, says Courtney Cuff, Pacific regional director for the association. Cuff and others also question Cadiz's rights to federal groundwater. "If the Cadiz project lays claim to the water rights that underlie federal lands, we're concerned that this would jeopardize public assets in return for private gain," Cuff says.

This clash between profit and ecology is part of a larger battle over the growing privatization of water. Corporations are tapping a global market worth nearly \$1 trillion, according to the World Bank. Corporate water

now flows to roughly 15 percent of the U.S. population, according to the EPA—leaving plenty of room for growth in what *Fortune* magazine calls this century's top investment.

How did a foundering company with no track record in the water business convince the Met that it was worthy of a fifty-year, \$500 million deal? "Without the political support Keith Brackpool has been able to build, this project would be dead in the water," says Sierra's Czamanske, a widespread charge both the company and the Met vehemently reject.

Brackpool's political clout is well documented. After donating \$95,000 to help elect Governor Gray Davis (he has since given Davis another \$120,000), Brackpool was promptly appointed co-chair of the governor's Agriculture and Water Transition Task Force, crafting policy recommendations for the Davis administration. He has remained Davis's chief water adviser and sits on the governor's Commission on Building for the Twenty-first Century, a panel addressing water, housing, and other issues.

Davis also included Brackpool on a high-powered October 1999 trade mission through Europe and the Middle East, according to the *San Francisco Chronicle*. On their visit to Egypt, Brackpool and the governor toured the Tushka desert farming project, which Cadiz's subsidiary Sun World is developing with a major Saudi firm, Kingdom Agricultural Development Company.

Davis, who has no decision-making role to play in the project, has kept mum about the Cadiz controversy. Both Cadiz and Davis's office deny the governor has done anything on behalf of the project, or that there is any conflict of interest.

But Cadiz officials have lobbied the governor's staff on several occasions, according to lobbying records filed with the state. The reports show gifts to Davis assistants Cadee and Chad Condit, and lunch with Davis cabinet

secretary Susan Kennedy, at Brackpool's tony Manhattan Country Club in Manhattan Beach, California.

Critics suggest the governor has quietly promoted the Cadiz-Met deal. "I've heard from one Metropolitan director that they were getting a lot of pressure from the governor," says Helen Wagenvoort, a former campaign coordinator to groups opposing the aquifer drainage. Adds one environmentalist who requested anonymity: "I have spoken with people in the governor's office about this project, and they have recoiled significantly and suggested this is not the project to be pressuring the governor on."

Brackpool has plenty of other public figures on board. Among the company's directors is Democratic Party heavyweight and former Congressman Tony Coelho, who briefly managed Al Gore's Presidential campaign. Another director, Tim Shaheen, C.E.O. of Sun World, sits on the Los Angeles Regional Water Quality Control Board, appointed by the governor. Cadiz manager Susan Lien is a San Bernardino City Councilor who serves on the San Bernardino Regional Water Resources Authority. Former state assemblyman Richard Katz, of the California Water Resources Control Board, previously worked as a consultant for Cadiz. The firm has also retained the services of former state assembly speaker Antonio Villaraigosa.

Perhaps the biggest prize of all was snaring former Interior Secretary Bruce Babbitt to be C.E.O. of a new Cadiz subsidiary, as yet unnamed, which will pursue water ventures in the Middle East. In a press release, Brackpool said Babbitt's "extensive environmental experience and keen understanding of political sensitivities associated with natural resource projects" would be "vital to our strategic initiatives in the Middle East." Babbitt chimed in, noting that the region "is an arid environment, very similar to parts of California."

Babbitt and his former deputy secretary David Hayes also work for the

powerhouse Washington, D.C., law firm of Latham & Watkins, one of whose clients is . . . Keith Brackpool. "It stinks," says one employee with the Department of the Interior and a former fan of Bruce Babbitt. "How can you not be cynical?"

Another federal official critical of the project says Babbitt was pulling for it even at Interior. "There was a lot of pressure from Babbitt, from David Hayes, from very high in the [Clinton] Administration. I thought I was going to lose my job."

The Met and Cadiz say these political connections are neither problematic nor unique. "Some people are surprised that this is the kind of thing that happens in these deals," says Adan Ortega, the Met's vice president of external affairs. "As far as we are concerned, welcome to our reality. This is the way it is." Wendy Mitchell, Cadiz's director of external affairs, denies the influence charge. "It doesn't have anything to do with political connections. This is a good project."

The company denied requests for an interview with Brackpool. Babbitt did not return repeated requests for comment.

Across the United States, with encouragement from public agencies such as the Met, urban utilities, and the EPA, firms like Cadiz are mining and selling aquifer water, running municipal water systems, and vying for lucrative deals to rebuild decaying infrastructures.

On the Texas Panhandle, oil magnate T. Boone Pickens is marketing 200,000 acre-feet a year from the Ogallala aquifer, the principal source of water for agriculture across the Great Plains. Many experts say the Ogallala will be tapped out in the next thirty years.

For Southern California's water troubles, entrepreneur Ric Davidge proposes—and state officials are considering—siphoning water from northerly rivers and shipping it south via ocean barges in massive plastic bags 100 feet wide and three football

fields long.

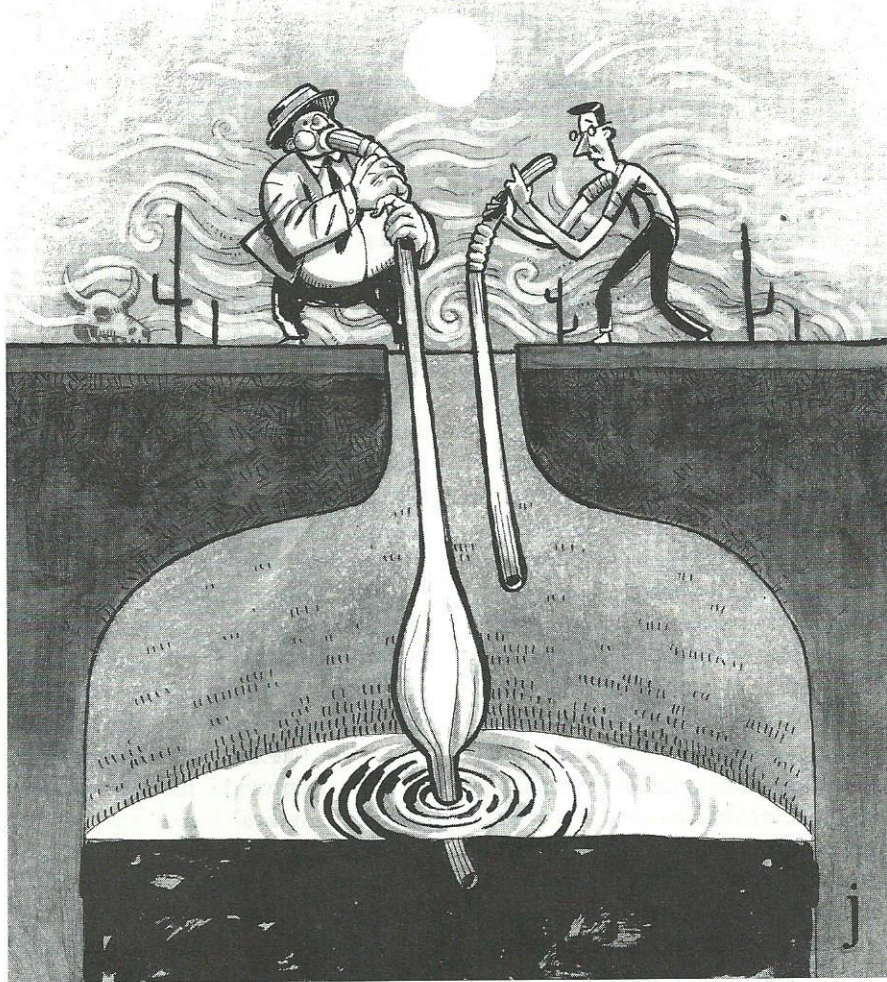
Last year, Puerto Rico awarded Suez Lyonnaise des Eaux the biggest water services deal ever—contracting out the island's entire water system for \$4 billion over ten years.

Aided by an April 1992 Executive Order signed by President Bush to give state and local governments

includes the nation's top water firms.

The results have not been pretty, with numerous cases of mass layoffs, huge cost overruns, and poor water quality.

Atlanta, which is paying United Water (a subsidiary of Suez Lyonnaise des Eaux, the world's second-largest water firm) \$21.4 million a year to



“greater freedom to privatize infrastructure assets,” cities such as Atlanta, Indianapolis, and Charleston, West Virginia, have privatized their water services. The EPA—staffed with its own Privatization Coordinator—helps cities explore privatization possibilities and also grants money to the National Council for Public-Private Partnerships, which promotes water privatization. The U.S. Conference of Mayors also encourages “public-private partnership” through its water development advisory board, which

run its water system for twenty years, has been plagued by cases of dry or malfunctioning fire hydrants, water service delays, and slow meter installation, according to reports by *The Atlanta Journal-Constitution*. One possible reason: United Water cut the city's water work force in half.

In Lee County, Florida, a water privatization project run by the British firm Severn Trent has hit numerous snags. A county audit said the company ran an inefficient, wasteful toilet-flushing program, had

a poor wastewater collection system, and operated a wastewater treatment plant that was at times out of compliance with state permit requirements and had problems with spills and contamination.

The water industry, led by the National Association of Water Companies, is now lobbying Congress to attach strong privatization incentives to federal water infrastructure grants given to cities.

"Our goal in managing water systems should not be just saving money," says Peter Gleick, president of the non-profit Pacific Institute for Studies in Development. "Our ultimate goal has got to be the provision of safe, reliable water. Sometimes the goal of saving money conflicts with that." The intensifying push to farm out water has an ugly recent precedent, adds Gleick: "We learned how important it is not to turn over our resources to private companies in the energy deregulation debacle. Water is too important to be left solely in private hands."

Out in the desert, scarcity creates a growth market. Following a historic 1998 agreement shepherded by Interior Secretary Bruce Babbitt, known as the 4.4 Plan, Southern California has been under mounting pressure to scale back its diet of Colorado River water from 5.3 million acre-feet per year to 4.4 million. A desert boom in Las Vegas (America's fastest-growing city) and Arizona over the past decade has spurred demands for more water from the beleaguered Colorado, which is undergoing severe drought.

Other sources are drying up. More than 350 miles to the north, Mono Lake, once a major supplier to Los Angeles, has been cut off, thanks to a landmark lawsuit protecting the mountain lake from being drained. And less water is available from Owens River in the Sierras: The water is needed to revive Owens Lake, which dried up after decades of excessive use. The dry lake has caused massive dust storms visible from

outer space.

Meanwhile, demand is intense on all sides—from the opulent, fluorescent casinos of Las Vegas to the thirsty suburbs of Phoenix and Los Angeles to huge desert farms growing water-intensive crops such as alfalfa, rice, and cotton. "While running out of water may seem disastrous, for some people it's a golden opportunity," says historian Gray Brechin, author (with Robert Dawson) of *Farewell, Promised Land* (University of California, 1999). "That is the nature of capitalism—a diminished source means you can make a fabulous profit."

Enter Keith Brackpool and Cadiz.

Rectangular islands of green in a sprawling sea of sand, the Cadiz specialty produce farms (operated by Sun World, one of California's largest vertically integrated fruit and vegetable corporations) are the ultimate in desert farming. There's not a drop of natural surface water in sight, so the Mojave farm pumps in the water to nourish its patented niche crops (the firm owns nearly 100 produce patents on such goods as the Superior Seedless table grape, Black Diamond plum, and Amber Crest peach).

If government scientists are right, this 1,600-acre farm is already lapping up what the Cadiz aquifer can sustainably provide, leaving little for the high-stakes water project in which the company and the Met have already invested more than \$18 million. The company and the Met insist the government scientists and environmentalists are wrong—way wrong. Company officials contend their aquifer can produce 30,000 acre-feet per year without damaging the area ecosystem. "We believe that we are right. We have many more experts, with many more degrees, with many more licenses than those that are funded by the Sierra Club do," says Cadiz's Mitchell.

But several scientists with the U.S. Geological Survey and the National Park Service agree the aquifer can sustain only about 5,000 acre-feet of pumping in a year without serious

permanent impacts. In fact, a 1996 analysis by an engineering firm found the Cadiz farm was already depleting nearby water levels by pumping 4,700 acre-feet a year.

Why such different estimates? "We don't have any need for any particular number or amount of water in our analysis," says U.S. Geological Survey scientist Alan Flint, who analyzed the aquifer. Cadiz and the Met, he argues, "have economic concerns about what they need to have to pump to make this a viable project."

Officials at the nearby Mojave National Preserve also stepped into the fray. In a February 28, 2000, letter to the Met, Mary Martin, National Park Service superintendent at Mojave, noted that the project could threaten federal resources: "Fenner Basin, which is expected to provide the primary source of natural recharge groundwater to the Cadiz Project, runs nearly thirty miles into the Mojave National Preserve, and is one of the park's major groundwater aquifers." The project, she said, "has the potential to adversely affect the groundwater resources of Mojave National Preserve and air quality in the Preserve."

Equally troubling, wrote Martin, the Cadiz water pumps would deplete groundwater under nearby Cadiz Lake and Bristol Dry Lake. Lower water levels "would then cause the upper sediments of the lakes to dry out and result in a dust problem. . . . NPS [National Park Service] considers this a significant impact and one that is unacceptable."

The official environmental impact statement stuck with the higher recharge estimates of Cadiz and the Met but included a monitoring system to measure and prevent depletion of the aquifer. Monitoring wells that measure water levels, pressure, brine concentration, and air quality will be sprinkled across the site to gauge ecological damage. It's a unique solution touted by the company, the Met, and most federal participants.

But the devil is in the details—and not everybody is convinced the mon-

itoring system will prevent trouble on the Mojave National Preserve, just fifteen miles away.

"By the time you see that draw-down in the monitoring wells, it could be too late to prevent impacts on the Preserve's groundwater resources," argues one government scientist who, after speaking on the record, insisted



on anonymity. "Think of it as a huge bathtub, very deep and full of sand, that is completely saturated with water at the subsurface level," the scientist explains. "Now suppose you put in a straw and pull out a bunch of water in the center of the bathtub. It will be a while before you see any response at the edge of the bathtub. Since there is very little water coming in, eventually that cone of depression you created in the center of the bathtub is going to spread out and flatten and decrease the water level in the whole bathtub."

There's another risk. By drawing nearby saline waters toward the project, this "cone of depression" could cause brine to gravitate toward Cadiz wells, seeping into Cadiz/Met water. "If this scenario turns out to be true," the scientist says, "this would put a monkey wrench in Met's plans, because their 1.5 million acre-feet over fifty years of indigenous groundwater would turn out to be saltwater." They might want to look into it: California's water code prohibits pumping groundwater if the practice

degrades water quality.

Mark Liggett, senior vice president and co-founder of Cadiz, insists the Mojave is "absolutely protected" by the monitoring system, which he says "will protect critical resources in and surrounding the project area regardless of the amount of natural recharge." He's confident monitors

"Water is too important to be left solely in private hands."

will catch any brine problem in time. "Obviously, from an engineering standpoint, the last thing in the world we want to do is induce brine to flow into our well field," he says. "That absolutely shoots us in the foot."

Higher up the political food chain, Senator Dianne Feinstein, whose 1994 Desert Protection Act created the Mojave preserve, urged Interior Secretary Gale Norton to step in and establish strict controls on the project. "Could the Bureau of Land Management place a temporary cap on the recharge portion of the project of about 5,000 acre-feet until this issue can be resolved?" the Senator asked Norton in a letter.

Norton—whose old law firm now lobbies for Cadiz, the *Sacramento Bee* revealed—rejected the idea of limiting groundwater removal.

Now Feinstein, in what could be a deal-breaker for Cadiz, is pushing appropriations legislation to prohibit the Department of the Interior from spending any time or money on the Cadiz project. "This is a project with a lot of unknowns, and the Senator would like those questions answered," says Feinstein press secretary Scott Gerber.

Cadiz's Mitchell calls the Feinstein cap a "nonissue" since the Interior Department has approved the project.

Representative Jerry Lewis, Republican of California, has also come out against the project. Like Feinstein, Lewis has written the Met to

urge a no vote.

Despite Interior's approval, the project is not a done deal. If Cadiz manages to kill Feinstein's maneuver, there's still more negotiating to do with the Met before the project can move forward. And if the Colorado River drought contin-

ues, "there may not be water available" for storage projects like Cadiz, says Jeffrey Kightlinger, the Met's general counsel. "Met's access to Colorado River water is in some jeopardy at the moment." Met officials predict a decision by November.

One of Metropolitan's thirty-seven directors, Tim Brick, remains skeptical. After four-and-a-half years of negotiating on the project, he says, the board has still not examined the potential ecological problems. "The most important environmental information has not been presented to the board yet," says Brick, who represents Met member city Pasadena. "So we've gone ahead putting together a deal and developing financial terms when we haven't really looked at the environmental impact that's very likely to occur. It's an upside-down way of looking at a project like this."

There are, Brick says, "other storage programs that are more promising, that do not rely on extracting native groundwater, and are far more feasible economically."

Beyond the financial and ecological issues lies a deeper concern about the growing transfer of public resources for private gain. "This aquifer is a common resource that underlies not only the land owned by Cadiz, but also federal land," says Jane Kelly, California director of Public Citizen. "There shouldn't be any profit opportunity associated with water in the first place." ♦