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Just Enough to Fight Over

By DAN GOODGAME

When God created the American West, to paraphrase Mark Twain, he provided plenty of whiskey to drink and just enough water to fight over. In Twain's day, the Forty-Niners feuded with fists and pistols over who could divert which Sierra streams to separate gold from gravel. In the teens and Roaring Twenties, thirsty young Los Angeles brashly laid claim to a snow-fed mountain river, piped it 230 miles south to the city and dispatched armed guards to protect the aqueduct from outraged locals wielding dynamite.

If things seem more placid today, that is only because the hired guns are lawyers and lobbyists camouflaged in pinstripes. High-stakes hydrobattles are brewing throughout the West as it runs out of new water sources. This arid region -- stretching from the 100th meridian to the Pacific -- now finds itself unable to accommodate both its rapid urban growth and a powerful agribusiness that guzzles 85% of all water at heavily subsidized prices that offer little incentive for conservation.

The current drought has dramatized these conflicts, but it did not cause them, nor will its end resolve them. In the Midwest and Southeast, farmers watching their crops wither this summer are simply victims of lack of rain, a circumstance that should improve next year if not next month. But in the West the water shortage is not just a freak of nature. Los Angeles receives 9 in. of rainfall a year and Phoenix only 8, vs. 40 in. of precipitation for Chicago. Almost all the U.S. flatlands west of the 100th meridian, which runs from Texas to North Dakota, consistently receive too little precipitation to sustain agriculture without irrigation. Says Dennis Mahr, a Southern California water manager: "We're in a constant state of drought, and we've learned to live with it."

The region's thirst will only grow: California's population is expected to climb from 27 million to 36 million over the next two decades. That will require an increase in water use of 1.3 million acre-feet a

year.* To meet this daunting future demand, the California department of waterworks has proposed $700 million worth of new dams, aqueducts and other works. That plan, however, is widely dismissed as unaffordable and unnecessary: one study calculates that it could deliver water only at a cost of over $500 an acre- foot, twice the present price for Southern California's coastal cities. "The days of the big water projects are over," says Colorado Water Lawyer John Musick. "What we're going to see is more competition for the water we already have."

The skirmishes and shortages are already evident across the West. In the San Francisco area, once lush gardens are withering under strict water limits. Lake Tahoe has retreated 5 ft. down its banks, leaving popular beaches high and dry, while parched Reno threatens to pump the lake still lower. In Arizona water scouts from the booming cities are roaming the landscape with checkbooks ready, buying farmland 90 miles distant just to get the groundwater rights. The vast Ogallala Aquifer, an underground lake that stretches from South Dakota to Texas, is being overdrawn by wells at a rate of 5 ft. a year in places, driving entire counties out of irrigated agriculture. Meanwhile, farms and cities from Salt Lake City to San Diego are literally drinking dry the Colorado River, which now peters out, exhausted and polluted, in the Mexican desert, miles short of the sea.

Westerners have not so much adapted to their environment as they have defied it and remade it. This has required the region's Senators and Governors to sink deep wells into the federal treasury and draw forth sprawling, multibillion-dollar water-moving and -storage schemes (notwithstanding the popular image of Westerners as self-reliant and suspicious of meddlesome Government). Thus in the midst of the current nationwide drought, the 74 golf courses around Palm Springs, Calif., have plenty of cheap federal water to keep their sprinklers hissing, while Arizona farmers can afford to grow water- intensive crops like alfalfa in the middle of the desert. Little wonder: water in Palm Springs costs the golf courses just $18 an acre-foot.

The wasteful effect of these subsidies is not widely understood. Many outsiders, as well as most locals surveyed by the Western Governors' Association, falsely believe the region would have sufficient water if only profligate cities like Newport Beach, Calif., and Scottsdale, Ariz., made do with fewer swimming pools and car washes. Rather than match supply to demand by steeply raising water rates, most political leaders merely exhort residents to take shorter showers and flush toilets less often. Los Angeles will soon spend $600,000 broadcasting such bromides.

Public-spirited campaigns have been far more effective in Arizona, where the forward-looking 1980 Groundwater Management Act restricts depletion of aquifers and effectively raises water costs statewide. Tucson, which had suffered an alarming 120-ft. drop in its water table, imposed a scaled billing system, charging more per gallon as water use increased. The city's per capita water consumption dropped from a

high of 205 gal. a day in 1974 to 161 now. California could use similar conservation laws; in Palm Springs, where household water costs 46 cents for 100 cu. ft. (vs. $1.16 in Tucson), per capita use is 459 gal. a day.

Yet while residential conservation is desirable, it cannot accommodate the West's urban growth. To save enough water for their projected 33% population leap over the next two decades, Californians would have to cut per-person consumption by one-third, an unprecedented feat of discipline by U.S. standards.

But here's the good news: because agriculture now consumes 85% of the West's available water, a mere 4% saving by farmers would provide enough for new uses, even if the cities continue to splash water at the current rate. Says Thomas Graff, senior attorney for the Environmental Defense Fund: "The West has plenty of water to meet the future of its cities and industries as well as for environmental values, but its farmers must be given incentives to use less water."

More good news: the opportunity for conservation is considerable, considering the scale of profligacy now encouraged in Western agriculture. Throughout the region, scarce but subsidized water is inefficiently flooded onto marginal soil to raise crops like cotton and rice that are already in surplus and must often be bought at a loss by the Federal Government. A recent study, commissioned by Democratic Congressman George Miller of California, showed that fully a third of the Government's $535 million annual spending on irrigation water flows to farmers who receive other agricultural subsidies. Miller has introduced legislation to halt this double dipping.

Few farmers waste water by choice. Marc Reisner, author of Cadillac Desert, an incisive history of water development in the West, observes that subsidized water is "so cheap the farmers can't afford to conserve it." Ten miles west of Phoenix, for example, Mike Duncan, 38, would have to spend considerably more to irrigate his cotton if he were to use water-saving drip tubes. "If I farmed in the Coolidge area, where water is $80 an acre-foot," Duncan says, "I'd most seriously look at using drip irrigation." Instead, Duncan gets water at the federally subsidized rate of $9 an acre-foot. Better to keep pouring it on the field.

Like natural gas a decade ago, water is in short supply only because of outmoded laws and customs that prevent its sale to willing buyers in most states. The doctrine of prior appropriation has in practice meant "use it or lose it." Thus Utah, for example, diverts Colorado River water for which it has little present use. Other obstacles to water marketing are bureaucratic: muscular interests like Southern California's metropolitan water district and the U.S. Bureau of Reclamation tend to view water marketing as a threat to their present service monopolies.

If farmers could freely sell or lease their water rights, profit motives would provide a powerful incentive for conservation. In Arizona, where such "water ranching" is widespread, farmers are drawing top dollar and, in the words of former Governor Bruce Babbitt, "retiring to beachfront condos in La Jolla ((Calif.)) to raise martinis instead of alfalfa." If water rights were widely traded, proponents say, cities and factories could assure their needs for posterity. Agriculture would still receive four-fifths of the West's water and would thrive, despite the increased costs.

Already, farmers have proved they are able to profit in some districts where unsubsidized irrigation costs as much as $75. They shift to crops that use less water, require heavy capital investment and bring a higher price: orchard fruits and nuts, specialty vegetables, safflower. They invest in drip irrigation and other water-saving technologies, and, where possible, water their land with inexpensive sewage effluent.

For all these benefits, free-market water stirs enmity in rural communities. La Paz County in western Arizona has watched with alarm since 1985 as nearly half its privately held land has been sold, mostly by farmers, to water- ranching interests. County Manager Neta Bowen decries the loss of tax base and employment: "When farmlands are retired in a community that depends solely on agriculture, what happens to the corner grocery? The cafe? The gas station? The local bar?"

One answer: some towns might tap the West's outdoor recreation industry, which is worth $40 billion and booming, not least among foreign visitors. Western recreation should get a fresh boost from water marketing. Many environmentalists support the concept, especially as it recognizes the "in- stream values" of water: for trout fishing, white-water rafting and habitat for game birds and animals. Says Babbitt: "In many parts of the West, a cow has a lot less economic value than an elk." It is time for water laws and practices to recognize that new equation.

*An acre-foot is the amount of water necessary to cover one acre to the depth of one foot, or roughly 325,000 gal.

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