

CHAPTER 27

WATER POLICY

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“Why is government allowing new development and golf courses when water is so scarce that we have to ask for it in restaurants?”

Anyone who has lived in Honolulu more than a few weeks has encountered Board of Water Supply (BWS) trucks with the slogan “Pure Water—Man’s Greatest Need.” Yet the Board wants us to abandon the time-honored expectation of a glass of water in a restaurant.

A friend of mine claims every faucet in New York City leaks. An exaggeration, of course, but how is it that uptight New Yorkers can be so careless about their plumbing while we in Honolulu now have to ask for a glass of water? One would think water is not scarce at all in New York, while in semitropical Hawaii water is rare and dwindling. This impression is probably wrong in both places.

No one doubts that we all need water but Honoluluans and New Yorkers alike must ask two questions: How much water do we really

need? Under what legal and institutional conditions do we get it?

Water departments in both Honolulu and New York City—and many in between—fret increasingly about their inability to satisfy growing water demand in the manner to which we users have become accustomed. Traditionally, as populations grew and economic activities required more water, the water agencies would simply go out and find new sources—"supply augmentation." But new sources have become more and more difficult and costly to come by. "Demand management"—inducing conservation—is the other possibility.

For either supply augmentation or demand management to succeed, the price we pay for water and the legal and institutional conditions of our water use must be set right. With the right pricing and suitable property rights, we would find that water is not really scarce in Honolulu, at least not in any degree to cause serious concern.

Water Pricing. A higher price would convince many of us that our water "needs" are less intense and inflexible than we thought. Hosing down the driveway, watering lawns, and even bathing, housecleaning, laundry and cooking habits can be adjusted. Any number of studies, for Honolulu as well as other places in the world, confirm this responsiveness to higher water rates.

The price New Yorkers pay (or rather the price they don't pay) is an important reason for their lackadaisical attitude toward wasted water. New York City has traditionally covered the costs of its water department by levying a flat fee on all customers. In return, people can use as much water as they want. The New York City water department has no way of knowing how much water individual customers are using—very few of the city's dwellings and businesses have meters. Without metering, the water department cannot bill customers in proportion to their use. People thus have no personal incentive to worry about wastefulness. The only "cost" of letting the faucet leak is the sound of dripping water.

Like New Yorkers, Honolulu apartment dwellers generally lack a personal price incentive for conserving water. Most apartment and townhouse projects are "master metered," with one bill for the entire complex sent to the owner or owners' association. Single-family dwellings and business structures, on the other hand, pay (as of 1992) \$1.34

per thousand gallons, plus a billing fee.

Most agricultural use on Oahu, including sugar and pineapple, is self-supplied. The BWS has relatively few agricultural customers, who together account for only 2 or 3 percent of total water delivered. These few, however, have been a potent political force, as indicated by a preferential rate structure. After buying the first 13,000 gallons at the same rate as everyone else, they pay only \$0.69 per thousand gallons. That price is no great incentive to conserve.

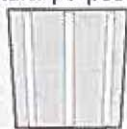
The BWS's charter requires that it cover its costs. To do so, it has had to raise water rates considerably in the past few years. Even so, a number of real, but non-cash costs are ignored. For example, the Board does not count as "cost"—at least not for rate-making purposes—the accumulation of mains, pumps and other equipment contributed by developers over the years. The BWS eventually will have to replace this infrastructure and so it really should take it into account in calculating costs. Also, it should recognize that inflation alone will boost replacement costs to several times the original. Finally, if water scarcity is truly increasing, like oil it has value just sitting in the ground. Currently, the BWS ignores this scarcity value. All things considered, the true economic cost of water is substantially higher than the amount we now pay. In fact, the current price, adjusted for inflation, is not much more than it was 20 years ago.

Honolulu does not differentiate between high and low cost customers. Homesites at high elevations, for example, require much pumping to bring water up from wells close to sea level. Despite the high cost of this pumping, hilltop customers pay the same \$1.34 per 1,000 gallons as everyone else. Until recent rate hikes, the BWS's cost of pumping water to the top of some posh neighborhoods in Honolulu probably exceeded what these generally well-off customers paid for it.

Finally, the BWS is a government agency, albeit a semi-autonomous one. By charter, its revenues cannot exceed its costs. Managers and staff cannot benefit from raising rates and, given their engineering backgrounds, their orientation is toward augmenting the supply. The thought of clearing the market by means of raising prices, instead of finding new water sources, may not have even occurred to them. Certainly, that approach would devalue their engineering degrees and experience.

How it's used

The vast majority of Hawaii's water is used for agricultural purposes.



Domestic
182.8

Commercial
31.04

Electricity
86.04

Industrial
16.19

Agricultural
333.35

Ground
water
649.4

Hawaii water use — 1985
(million gallons per day)

Surface
water
755.7

Domestic
16.69

Hydroelectricity
164.39

Industrial/electricity
6.5

Agricultural
567.86

Source: State of Hawaii, Department of
Business, Economic Development and Tourism,
Data Book 1991, table 141.

As a monopoly, the BWS has no competitive pressure. Raising rates results in complaining customers in the short run, regardless of the long-run benefits. All told, the incentive is to keep rates as low as possible consistent with good service—whatever the true economic cost.

As of 1988, the most recent year for which figures are available, Oahu's two sugar plantations accounted for 44 percent of the 408 million gallons used on the island in an average day. Much of this water is well-positioned to serve new urban areas and could conceivably be transferred to supplement stretched-thin urban sources. What are the prospects for such transfers?

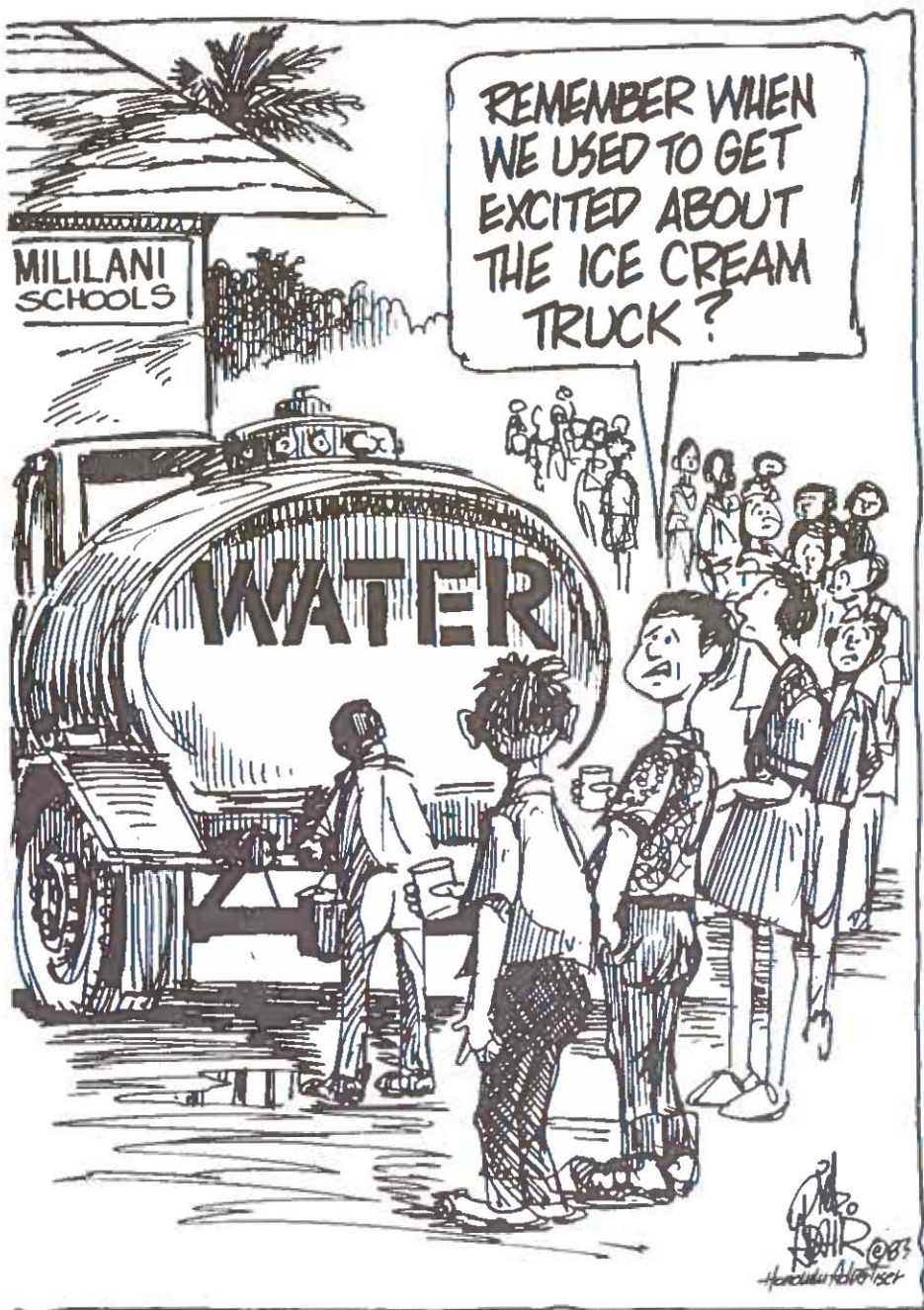
Legal and institutional framework. I began by chiding New York. For equal-opportunity bashing, let's turn to California. West Coast water waste comes not so much from lack of metering as from lack of a well-defined property right in the water. Farmers can get water (from

federal Bureau of Reclamation projects) that generally can't be sold to nonfarmers. Federal water projects were intended to help farmers, not cities; no necessity or procedure for transferring the water out of agriculture was ever envisioned. Thus, California farmers continue to irrigate low-value crops such as cotton and alfalfa. Even with cheap federal water, these crops often depend on government price supports for continued viability.

California farmers pay very little for this water. Their rates are determined mainly by project construction outlays many years and much inflation ago, and often heavily subsidized from the beginning. More than one researcher has pointed out the absurdity of Southern California communities' having to pay in excess of \$1.50 a thousand gallons for new water (plus the cost of transporting it) while irrigators commonly pay only a tenth or twentieth of that to grow crops in surplus nationally. And yet that's exactly what's happening.

Like California, Hawaii has many acres of land in agriculture, particularly sugar. Sugar plantations, or the landowners (not necessarily the same people), are obvious potential sellers of water. Like some of California's crops, sugar production probably would not survive without federal support. Unlike California, however, water for Hawaii sugar was developed privately, with no federal subsidies. Much of it was done before statehood and under a water-rights regime that by the 1970s had evolved into a highly flexible, efficient, market-oriented system. Irrigators felt an ownership in water rights, which they frequently bought and sold as their uses changed. Because the right to sell as well as the right to use were clearly defined and unquestioned; those who had "surplus" water—which they valued lower than someone else was willing to pay for it—had every incentive to quit whatever they were doing with it, and sell it to the willing buyer. That, of course, worked to everyone's advantage—a classic win-win result.

But a 1973 court decision, a 1978 amendment to the State Constitution and the 1987 State Water Code have combined to stop such transfers. The Hawaii Supreme Court declared in 1973 that the State, not individuals or companies, was in some sense the owner of the water. This reversed more than a century of practice and law on the subject. The 1978 constitutional amendment was an attempt to solidify the control offered by that decision. The water code failed to define what



is meant by a water right, raised uncertainty on the question of transferability of such rights, and erected a state bureaucracy with broad powers to approve or disapprove water transfers.

Causes of “shortage.” These three developments have combined to create one gigantic mess. The prospect for orderly water transfers is dim; the prospect for conflict in the use of water grows daily. This lose-lose situation bears much of the responsibility for the resulting water “shortage.”

On the supply side, imminent shortages stem as much from these institutional barriers to transfer as from physical limitations. On the demand side, the poorly calculated and inversely structured BWS water rates lead to overuse. Government activity is at the core of both these problems.

I hope this all sounds crazy to you—because it is. Do our political leaders think they are “solving” the water shortage by prohibiting restaurants serving water except on request? They might as well ask us to empty the ocean with teaspoons. Some say this new rule sensitizes everyone to the need to conserve water. But the rule mostly just distracts people from the real cause of the “shortage,” and paves the way for supply augmentation and the higher costs that have been and will continue to be a natural consequence of Hawaii’s unenlightened water policy.

