Water Shortages Wouldn’t Exist if the Price Were Right
By Deborah Moeller and B. Delworth Gardner

On April 22, the Deseret News reported that Salt Lake residents will be asked to voluntarily curtail lawn-watering through the late spring and summer, while mandatory restrictions will be placed on many water users from North Salt Lake to North Ogden. Water managers insist there is no present “crisis,” although Salt Lake City officials were told that the capital city will receive only 60 percent of its allocation from Deer Creek Reservoir, the city’s single biggest source of water—an unprecedented reduction.

Reservoirs throughout the Wasatch Front are unusually low this year. What can be done? Ivan Flint, manager of the Weber Basin Water Conservancy District, stated, “We pretty much have to rely on people to be patriotic enough to conserve.”

Mr. Flint, like most managers of the government-run water districts in Utah, is making a serious error. Relying on “patriotism” to get people to conserve has sketchy success outside wartime. A mundane commodity like water raises patriotic fervor in few people, and many of us may respond by taking advantage of our neighbors’ patriotism! Rather than solving a water-shortage problem, patriotic conservation is a formula for increasing civic strife.

Fortunately, there is a better solution that doesn’t rely on water districts pandering to our patriotism. It relies on a far more reliable and equitable behavior: self-interest—in this case, consumers’ wallets.

Given the incentive, Utahns can and will conserve water voluntarily. The Utah Division of Water Resources noted in 1999, “60 percent of Utah’s potable water is used exclusively for landscape irrigation,” and in 1997 estimated that Utahns use 30 to 50 percent more culinary water for outside watering than is needed to maintain current lifestyles and landscapes. But if Utahns can use less water, why don’t they?

The principal reason is that Utah, a desert where water is supposed to be scarce and valuable, has ridiculously cheap water. Utahns enjoy the third-lowest culinary (potable) water rates in the United States, and are second only to Nevada in most water used per capita.

Basic economic theory postulates that price influences how much of a commodity is demanded. Demand for necessities is relatively inflexible, or “inelastic,” but demand for luxuries

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like expensive foods is “elastic.” Water demand is very interesting: for drinking water, a necessity of life, demand is very inelastic. But demand for other water uses, such as lawn irrigation and even indoor use, is not.

In a 1990 study of household water consumption in six Utah cities, the consulting firm CH2M Hill found that for every 10 percent price increase, water demand decreased by 5.74 percent. And this finding was for water use in winter, when residents were not watering their yards. In a study of 44 northern Utah communities, one of this article’s authors found that demand for urban water was even more elastic: a 10 percent increase in the price corresponded with a 7.7 percent reduction in the quantity of water demanded. Since Utahns can maintain the same yards with much less water, it stands to reason that summer demand could be quite elastic, so that a 10 percent price increase would decrease use by 10 percent or more.

Inappropriate water pricing likely contributed to our present “shortage.” According to Flint, last year’s long, dry summer caused residents to use “record amounts of water,” so last fall the district’s reservoirs started only about 35 percent full, compared with 50 percent for a normal year (and winter’s minimal precipitation did not make up the difference).

With no price incentive to conserve, residents rationally chose to use more water to sustain their lawns and gardens. Higher prices would have given residents considerable incentive to curb water use by watering more efficiently or even changing their landscaping. Unless prices are changed this year, this shortfall is likely to recur, no matter how patriotic some residents are. If the price is raised, all water users will have monetary incentives to conserve.

Why, then, are price increases conspicuously absent from the debate on water conservation? This logical solution is overlooked because although water is used and sold like a commodity, it is too often also viewed as a community resource to which people have entitlement. Instead people talk about conservation, patriotism, and, worst of all, mandatory restrictions.

“We think if we get the 20 percent reduction [in water consumption] that we can make it,” LeRoy W. Hooton Jr., director of Salt Lake City’s Public Utilities Department, told the Deseret News. We have a great idea to achieve that goal—increase the cost of water 20 percent. It’s a lot more likely to work than Flint’s plan to get culinary water users to reduce consumption: “We’ve just asked them to do their part.” Will people do their part when their grass starts to turn brown?

Utah’s growing water demand means water supply problems will not likely be temporary. We foresee that in the next 10 years, water managers will have to raise prices—especially summer water rates—and institutional pricing rules must be devised that will permit them to do so. If they don’t do it now, the cost to the community will be higher later.

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