

# *The K.F. Stone Weekly*

(Formerly "Beating the Bushes")



April 26, 2015

## A MEMO TO GOV. JERRY BROWN

**To:** Governor Jerry Brown **From:** Kurt F. Stone **Re:** California's Latest Drought

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While reading articles on the current 3-year long California drought and immersing myself in the latest [United States Drought Monitor](#) facts and figures, I got to remembering the drought we weathered together back in the 1970s over at



Back in the Day

the Office of Planning and Research. (You may recall Governor, that I wrote a piece about OPR last October entitled [OPR: Remembrance of Things Future.](#))

Back then, the drought we faced was pretty grim -- although nothing in comparison to what you've been going through these past several years.

I well remember some of the more fanciful solutions we came up with back in the day, ranging from seeding potential rain clouds that were hanging around the California-Nevada border to dragging icebergs down from Glacier Bay, Alaska. And then there were the legal, political and ethical questions involved in trying to make it rain:

*From the legal perspective, there was the issue of liability. Say we were able to successfully seed clouds over at the California-Nevada border. Would there be*

anything keeping Nevada from bringing suit, claiming we stole their rain? Then too, say that the rain we created through cloud seeding washed away downtown Burbank, as happened in 1938? Would we be legally liable for losses, damages and reconstruction?

*Politically*, I remember the debate over whether claiming to have reversed a drought would be politically productive or just sound preposterous; might not we look like a bunch of stone-out freaks? Remember, these were the days when the press was starting to refer to you as "Governor Moonbeam" and people were wont to believe that most of the people who worked for you were exiles from Woodstock. I remember someone on the staff pretty much putting that debate to rest by quoting the late Ambassador Dwight Morrow to the effect that *Any party which takes credit for the rain must not be surprised if its opponents blame it for the drought.*



*Ethically*, there was the question of *should* we make it rain? Were we somehow injecting ourselves into an area best left to the heavens -- both literally and figuratively. My contribution to that debate was recounting the *midrashic* tale of חוני המעגל (*Khoni ha-maagahl* -- "Honi the Circle-maker") who, during a terrible drought in ancient Israel, drew a circle in the dust, stood inside it, and informed God that he would not move until it rained. Well, when it began to drizzle, Honi told God that he was not satisfied and expected more rain; it then began to pour. . . . and pour. Just before he drowned, a voice came from the Heavens proclaiming: *Honi! If you wish to make it rain, you will have to accept the consequences of your actions. However, it you will leave it to me, everything will be fine. But do not usurp my authority!*

Back during this earlier drought, the terms "global warming" and "climate change" played virtually no role. Indeed, those expressions were still several years into the future. Our "solutions" to the crisis were imaginative, fanciful and likely undoable. Nonetheless, at least we got people to thinking. Today, of course, people both in and out of government spent entirely too much time debating *why* droughts occur and entirely too little on what to do about them. Today, when a majority of California is in the third year of what experts are calling an "[extreme to exceptional](#)" drought, your emphasis isn't in the least bit fanciful. You have imposed mandatory water restrictions throughout the state and are looking for more ways to make less water go further. And unlike back in the '70s, you now have to put up with the Foxified right who stand in the

way of dealing realistically with the crisis by [claiming](#) that the drought is due to environmentalists who have put the welfare of "so-called endangered species" above that of business and agriculture.



And you wanted a second (actually a fourth) term?

While reading, studying and contemplating what's going on and what we can possibly do beyond water rationing, I thought: "What do other drought-infected countries do in order to survive?" Then it dawned on me . . . Israel. If ever there were a country who got the short end of the stick when it comes to potable water, it is Israel. And yet, for more than a century, they have been making a desert

bloom while building cities, universities and a thriving economy. How do they handle their water issues?

Permit me to share with you, Governor, a host of positive, imaginative, eminently [doable things](#) which can be enacted in California:

### **1. Israeli cities recycle three-quarters of their water.**

Israeli farms don't just use less water than their American counterparts; much of their water is reused. Three-quarters of the water that runs through sinks, showers, washing machines and even toilets in Israeli cities is recycled, treated and sent to crops across the country through specially marked purple tubes. According to the Pacific Institute, which conducts environmental research, California recycles only 13 percent of its municipal wastewater. Israel also encourages recycling by giving reused water to farmers tax-free.

### **2. Israel gets much of its water from the Mediterranean Sea.**

Israelis now have a much bigger water source than Lake Kinneret (Sea of Galilee): the Mediterranean. Four plants on Israel's coast draw water from the sea, take out the salt, purify the water and send it to the country's pipes — a process called desalination.

The biggest of the four plants, opened in 2013, can provide nearly 7 million gallons of potable water to Israelis every hour. When a fifth opens as soon as this year near the Israeli port city of Ashdod, 75 percent of Israel's municipal and industrial water will be desalinated, making Israelis far less reliant on the country's fickle rainfall. Why couldn't we do the same with water from the Pacific Ocean?

I know, I know: desalination *does* cost money, uses energy and will raise honest environmental concerns. One cubic meter of desalinated water takes just under 4 kilowatt-hours to produce. That's the equivalent of burning 40 100-watt light bulbs for one hour to produce the equivalent of five bathtubs full of water. And yet, San Diego County is investing in desalination. [IDE Technologies](#), which operates three of Israel's four plants, is building another near San Diego, slated to open as soon as November. Once operational, it will provide the San Diego Water Authority, which serves the San Diego area, with 50 million gallons of water per day.

### **3. Israelis irrigate through pinpricks in hoses, not by flooding.**

No innovation has been more important for Israel's desert farms than drip irrigation. Most of the world's farmers water their crops by flooding their fields with sprinklers or hoses, often wasting water as they go. With [drip irrigation](#), a process pioneered in Israel 50 years ago, water seeps directly into the ground through tiny pinpricks in hoses, avoiding water loss through evaporation.

Four-fifths of all water used in California goes to agriculture, and California's farmers have been draining the state's groundwater as rain has stopped falling. But as of 2010, [less than 40 percent](#) of California's farms used drip irrigation, according to the Sacramento Bee.

### **4. Israel's government owns all of the country's water.**

Israel treats water as a scarce national resource. The government controls the country's entire water supply, charging citizens, factories and farmers for water use. Residents pay about one cent per gallon, while farmers pay about a quarter of that.

In California, though, many farms drill from private wells on their property, drawing groundwater as rain has thinned. Some have even begun selling water to the state. As you well know Governor, state regulations to limit groundwater use, which you signed last year, won't be formulated until 2020. Of course, adopting Israeli-style regulations in California would be near impossible, as some of California's water rights holdings are more than a century old.

### **5. Water conservation is drilled into Israeli culture.**

The Israeli ethos is to save water wherever possible. Kids are taught to turn off faucets and limit shower time. Israelis celebrate rain rather than lamenting it. Lake Kinneret's daily surface level shows up alongside weather reports in the paper.

Israelis' close attention to rainfall and drought comes from an education and culture that teaches them the importance of every drop in an arid region. With no end in sight for California's drought, Californians would do well to adopt a similar attitude.

Eilon Adar, director of Ben-Gurion University's [Zuckerberg Institute for Water Research](#) recently explained: *"You take 8-year-old children, you pump into their heads that they have to save water as a scarce national resource. In 10 years' time, they're 18 years old and they get it. It's in their blood."*

Governor: you know as well as anyone that California is never going to be free of concerns over its water supply; that's just the way things are. But you, who have always been a forward-thinking leader -- a man who understands that a journey of a thousand miles begins with a single step -- would do well to get your colleagues to start adopting more and more of the "big picture" strategy.

Challenge the people of California -- and the current generation of Woodstock exiles at OPR -- to start preparing for the future.

A future that, please God, will be both wonderful . . . and wet.

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