

EIR Science & Technology

Water development projects can keep California green

The drought could have been avoided, and can still be reversed. But it's the "Greenies" who turned the state brown by blocking water projects. Brian Lantz and Marcia Merry report.

In 1960, California voters approved a water development program that, if implemented, would have prevented the water supply crisis now hitting the state. The plans were only partially carried out over the past 30 years. As with the nation's infrastructure generally, the California projects were obstructed both because the national and state economy declined and funding dried up, and because the "green" conservationist lobby obstructed and prevented water supply development, for the ultimate purpose of ending growth in California.

Now that the fourth year of drought is parching the state, the issue is posed clearly for California residents: Resume a commitment to technology and infrastructure improvements, or suffer the disintegration of the economy, and the police-state measures that are in the works to "administer" the impoverishment.

A recent poll of the state's citizens showed that they want dams, canals, and reservoirs built. The statewide poll, conducted by the Field Institute of San Francisco, found that 71% of Californians surveyed said that ensuring an adequate water supply was a "critical" problem. Only recognition of the drug epidemic surpassed the water crisis as a "critical" issue. Eighty-five percent said it was "urgent" or "very urgent" to build major water supply facilities now. In state elections June 5, voters voted to tax themselves to save at least portions of the state's crumbling transportation grid.

However, saving the "Golden State" will take more than such outpourings of public opinion.

Drought is devastating agriculture

The catastrophic drought is now in its fourth year, and projected to carry over into at least a fifth. Agriculture has

suffered severely, and represents a full 10% of shrinking U.S. farm production. Rationing of water use has been implemented in more than 400 water districts, affecting millions of people.

This year's precipitation to date has been only 55% of average, on top of three dry years. The central coast is being devastated, because the runoff upon which it depends has been only 20% of average for the past three years, and this year, is only 10% of average.

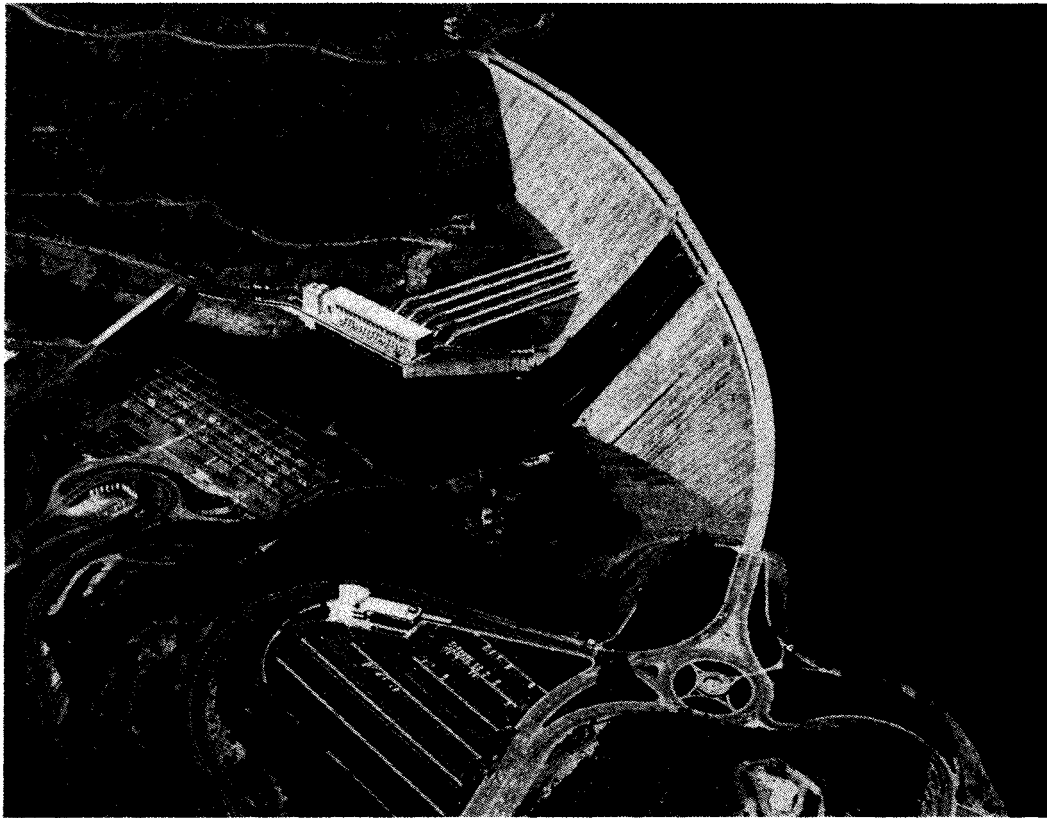
However, the problem is not "Mother Nature." Human beings just reneged on their duty to improve nature. No significant water supply capability has been added to the state since 1976. The plans approved in 1960, of which then-state legislator Caspar Weinberger was a leading sponsor, were designed for the State Water System to deliver 4.2 million acre-feet of water by the present time. Today, uncompleted projects limit deliveries to half that amount.

Big money behind 'Big Green'

Over the last 25 years, California has been the target of "conservationist" campaigns, conducted by the Conservation Foundation, the Natural Resources Defense Council, the Rockefeller Foundation, and others, to abandon the prospect of technological development and to knuckle under to austerity in the name of "saving the environment" from dams, canals, human population, etc. The backers of these agencies are the monetarist banking interests such as the Mellons and the Rockefellers.

Officials of the Washington, D.C.-based Conservation Foundation have described water projects as "boondoggles for civil engineers," which must be stopped.

The "Big Green" referendum that will be on the ballot



U.S. Department of Agriculture

The Shasta Dam, on the Sacramento River north of Redding, California—part of the Bureau of Reclamation’s Central Valley Project. Water development projects in California mean the difference between scrubland and one of the most productive agricultural regions in the world, yet no significant new capability has been added since 1976, thanks to the ecologists and the budget-cutters.

in California this fall embodies this anti-technology, anti-human perspective. Its sponsors include Jerry Brown, the former governor who is now the chairman of the California Democratic Party; and Tom Hayden, the longtime agent for radical environmentalist causes.

“Big Green” is a mammoth ballot initiative, the “Environmental Protection Act of 1990,” that sets up an eco-fascist superstructure, to drastically reduce living standards and productivity. A new bureaucracy called “Environmental Advocate” is to be created, one of whose tasks will be to police who gets to use water, and who does not. On Feb. 7, Tom Hayden issued a memorandum supporting Big Green, in which he said, “More jobs will be generated in environmental cleanup than from the status quo of capital- and energy-intensive industries.” California is the world’s shining example of successful capital- and energy-intensive agriculture. Without water, the state will turn brown, just as Jerry Brown demands.

However, long before the voters are to decide on a ballot referendum, there are actions under way to change legal precedents, business practices, and government procedures, to demoralize and force people into accepting the ruination of the state.

In turn, a movement to defeat Big Green, and to mobilize to restore government policy based on technology and growth will be a resounding defeat to the “green” movement everywhere.

The following material presents a summary of the physical geography of California, the scope of the current water crisis in the state, and the roster of water project designs that are “on the shelf,” waiting for the go-ahead.

Not a drop to drink

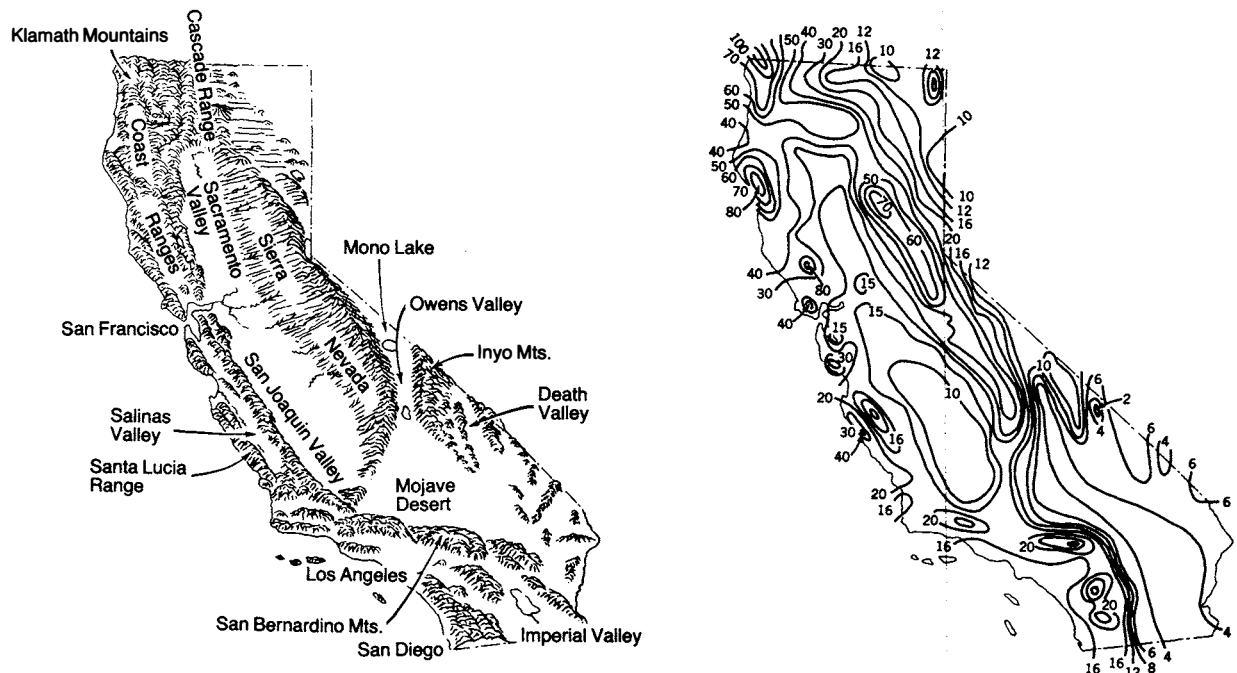
If you drive the length of California’s magnificent 1,100-mile coastline, you will see “water everywhere” in the Pacific Ocean, but inland, the 60-year record drought may mean, “not a drop to drink.”

California is a textbook example of how mountain topography can influence rainfall in an otherwise severely dry region. If you compare the two maps of the state, you see that the isolines of highest rainfall coincide with the highest reaches of the mountains (**Figure 1**). Proceeding from north to south: Klamath Mountains, there is a pocket of 100 inches a year of precipitation in the western range; Coastal Ranges, pockets of 70 to 80 inches a year; Sierra Nevada, areas of 60 to 70 inches. In contrast, the Mojave Desert averages 4 inches of rainfall a year.

The history of California is a history of the development of water—capturing it from the mountain runoff, and channeling it where and when required. Wells and rainfall also figure in the state’s water resource base, but the runoff from the slopes, and the network of aqueducts, reservoirs, canals, and channels are the basis for existence in the state. Because

FIGURE 1

California's mountain topography and rainfall



The maps show California's major mountains and water runoff basins, demonstrating how increased elevation can bring an increase in precipitation. Rainfall can result when air masses coming in from the Pacific are forced to ascend the slopes, then cool off. This process, known as the orographic type of precipitation, slackens above elevations of 6-7,000 feet, because the cooler air here is unable to hold or release much water. Precipitation in the state varies from less than 4 inches in Death Valley, to over 70 inches on the western slopes of the Klamath and Sierra Nevada Mountains. The high ranges serve as snow storage areas, keeping back the precipitation until spring or early summer, when the snowmelt feeds the rivers. Due to the drought, the snowpack in the Sierra Nevada, for example, is only 30% of normal.

water was made available in this favorable climate, California is a garden spot of the world, accounting for 50% of U.S. fruits and vegetables.

However, the state's productivity is now in jeopardy, as a result of the drought and the cessation of maintenance and expansion of water projects in the state. The last major water project was the core of the California Aqueduct, completed in 1976, but then funding was cut and other improvements abandoned.

The situation is worsening by the week. As of June, the end of the rainy season, the state has received only 65% of average precipitation. This makes 1990 the driest of the four consecutive drought years. This spring, the snowpack in the Sierra Nevada Mountains is the lowest in living memory. The last major drought persisted from 1760 to 1820—60 years! So there is no use, in this climate, of hoping for more rain "next month."

In the national western water supply report from the U.S. Department of Agriculture (May 21, 1990), which is the final report of the season, streamflows were well below average

in most of the western states, which depend on snowmelt for about 75% of their water supply.

The USDA service gave this summary of the crisis in California: "The California drought continues to intensify. Streamflow volumes are expected to be 36% of average state-wide. April precipitation was well below normal—only 50% of average. The driest areas were the San Francisco Bay and the Central Coast, where April precipitation was 20% of average. This season's precipitation to date is 55% of average throughout the state. The central coast is by far the hardest hit drought area. Runoff has been only 20% of average during the past three years, and has been only 10% of average this year."

Cuts, rationing imposed

Local government officials have been scurrying to make emergency management arrangements. As of late June, 400 local water agencies had imposed restrictions on water use, and more are expected.

In northern California, the strategic Sacramento River

Basin is expected to have a runoff of less than half of normal. The basin is the heart of the entire state water grid.

In June, the San Francisco Water Department implemented a 25% cut (on an annual basis) in the amount of water it subcontracts to 30 suburban cities in San Mateo, Santa Clara, and Alameda counties. The decrease is based on 1987 water use patterns. Cities that don't cut back will be forced to pay penalties, starting July 20. The cost could be as high as 10 times the current water price rate.

For example, Palo Alto will be required to cut back its water use by 26.7%, compared to 1987 levels. The Palo Alto water system serves about 57,000 people, who were already using 15% less water than in 1987. To make the additional use reductions, city officials released a plan on May 10 that called for a new rationing system, and for strict enforcement. The 14,800 single-family residences will have to cut indoor water use by 15%, and outdoor water use by 50%. Businesses will have to cut water use indoors by 10% and outdoor use by 50%.

The users of the San Jose Water Co. are likewise rationing. On April 1, a plan took effect to cut water use by 20% in the area, including most of San Jose, and all of Los Gatos and Saratoga.

The federal Central Valley Project, along with the State's California Water Project, the backbone of California's water delivery system, has cut water deliveries to many agricultural, municipal and industrial contractors to 50%. Some will get zero.

On the central coast, running from the San Francisco Bay through Santa Barbara, severe rationing is in effect for all citizens. Emergency state supplies of water may be supplied through pipelines normally used to carry oil! Another proposal is to build a multimillion-dollar desalination plant. Salt water intrusion is polluting the aquifers in Monterey County, an official agricultural disaster area as a result of the drought. Santa Barbara's primary reservoirs hold less than 100 acre-feet of water, down from a capacity of 10,000 acre-feet.

Santa Barbara is the site of a recent fire that destroyed 500 homes. The fire was apparently set by arsonists, but it was the drought that created a disaster "waiting to happen."

Environmentalists on the local Santa Barbara government board have refused for years to join in water projects, bringing the full force of the drought down on their constituents.

In Los Angeles, the giant Metropolitan Water District is offering cash rebates to conservers. The MWD supplies 15 million residents.

With varying stringency, such plans are in effect in almost all localities throughout the state. Some people are painting their lawns green. Sales of bottled drinking water have skyrocketed. But no matter what conservation steps are taken, these adaptations to water shortages will not solve the problem of how to supply more.

Water is life itself to California agriculture

Irrigation is not supplemental to farming in California; it is life itself. California irrigates 95% of its 10 million farmed acres; without water, farmland would revert to scrubland. Therefore, the drought, combined with the inadequacy of the State Water System, is wreaking catastrophe.

The state's 5,000 cattle ranchers are sending animals to slaughter early, as food costs have jumped 50-100%. Other farmers are walking away from already planted crops. Unfamiliar disease are spreading, taking hold of drought-stressed trees, vines, and plants. One billion board feet of lumber will be lost to infestations. Dry grasslands and forests also mean loss to fire.

Apart from agriculture being the centerpiece of California's \$800 billion economy, California's agricultural output is the mainstay for millions of tons of U.S. food. The following is just a selection of the foods in which California's output ranks high.

Animal protein. California is the top state in egg production, and the third largest producer of turkeys. California and Wisconsin are the top two milk-producing states, far exceeding any others. California is the sixth largest beef producer, ranking only after "cattle country" plains states of Texas, Oklahoma, Kansas, Iowa, and Nebraska. California and Texas are the leading producers of sheep and lambs.

High quality fruits and vegetables. California produces over 90% of the tomatoes for processing into sauces, prepared foods, and frozen and canned uses. The state produces over 90% of U.S. apricots, and over 90% of commercially utilized grapes. California and Florida account for most of the nation's citrus fruits. The state accounts for half of the commercially utilized production of peaches, and in that, accounts for 90% of the canned peaches, and all of the dried peaches.

Basic grains. The state produces 20% of the rice in the country.

Nuts and specialty foods. California produces practically all the almonds in the country, and most of the other nuts, as well as olives, avocados, figs, and other Mediterranean-climate crops, and dozens of spices.

Fiber. California accounts for over 20% of the cotton produced in the nation.