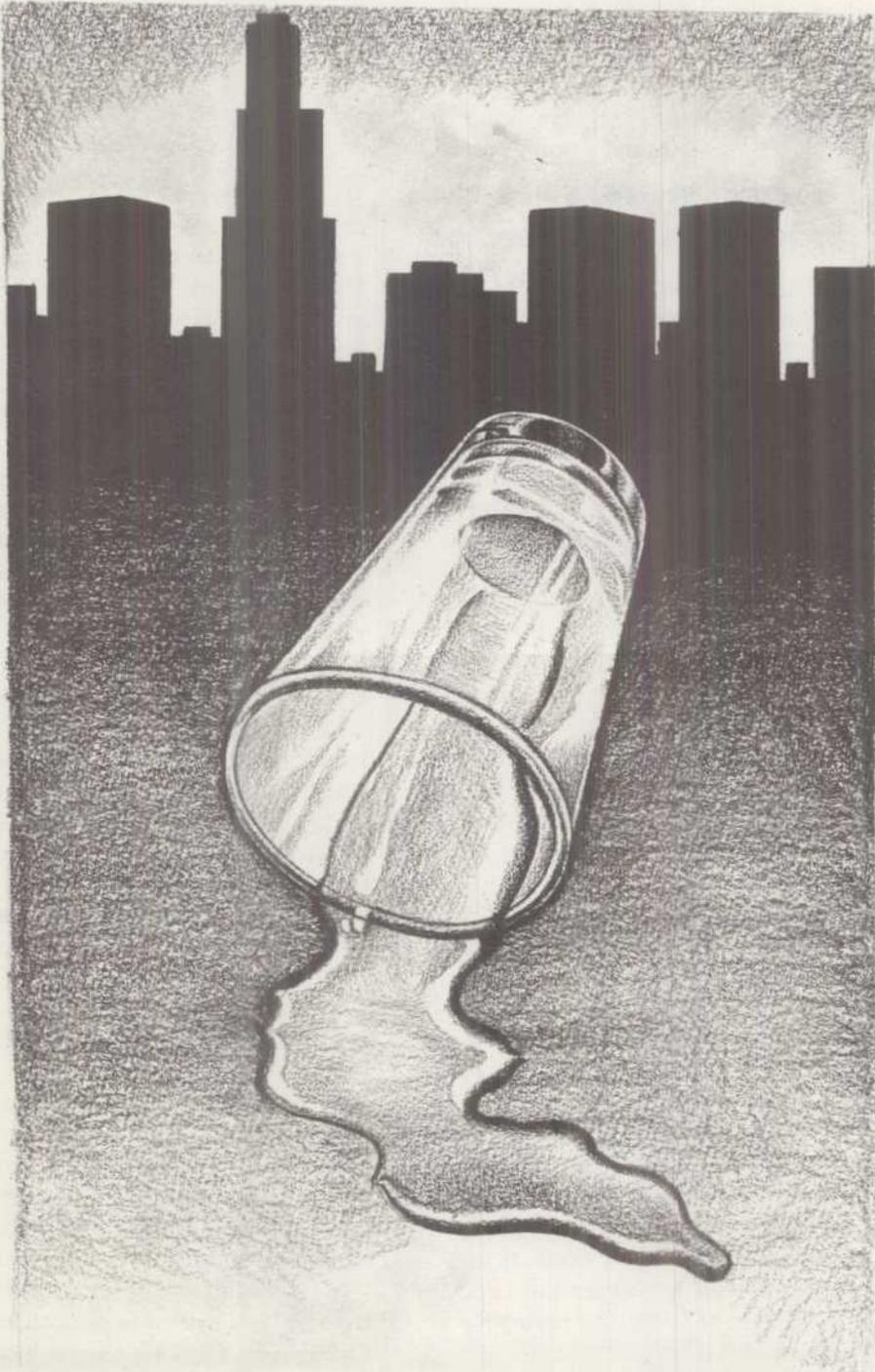


# FOCUS

## ON WATER



## **H**alf a glass won't be enough

By 1990 we will certainly be older and if Southern Californians aren't also wiser, the Southland may well be feeling the pinch of too little water. Experts at such think tanks as the Rand Corp. and World Watch Institute predict that unless changes are made, the shortfall could be about 240,000 acre-feet per year, roughly the amount of water required to meet the needs of a million people.

For the past few years, high rainfall and snowfall have swelled the Colorado River to record levels and various other factors have combined to keep Southern California from immediate thirst when the Central Arizona Project — granted rights to more than half-a-million acre-feet of water that Southern California has been using — begins operations late this year. But the fact remains that this is almost 20 percent of the Southland's total water supply.

And only the foolish rely on luck. By the year 2000, shortages are forecast at 600,000 acre-feet, about the amount of water needed by the entire population of Los Angeles.

That doesn't leave much time to resolve the legal and political problems, to engineer, finance and construct necessary projects, says Carl Boronkay, Metropolitan Water District general manager. Metropolitan imports about half the water consumed in Southern California from the Colorado River and

from Northern California rivers via the Sacramento-San Joaquin Delta and the State Water Project.

Since the 1982 defeat of the proposition to build a peripheral canal around the delta as part of the State Water Project, Met's efforts have been aimed at improving water transfer across the delta by removing bottlenecks.

This, explains Boronkay, was the basis for the governor's water plan, which failed to clear the Legislature last year. A delta transfer facility would bring at least another 500,000 acre-feet to the State Water Project. About half of that would come to Southern California.

Ever since the State Water Project was voted into existence more than 20 years ago, engineers have known a trans-delta facility would be required, but the decision was made to delay construction until the need became more urgent. By that time, however, political feuds erupted, killing every attempt to upgrade the project.

Many Northern Californians would rather send surplus water into the Pacific than see it go south, other opponents worry that another facility would harm the environmentally sensitive delta, and farmers battle changes they believe could affect irrigation water.

The potato is so hot, the state's governors, and many other politicians, have feared its scorch. But the Southland's economy could be brought to its knees by a lack of water. Southern California's future depends upon healing the old wounds.

Metropolitan is committed to averting such a crisis. But, says Boronkay, that means steps — frozen in place for the past decade by political infighting — must be taken soon. Half a glass may be better than none but it won't be enough.

## **T**he making of a knight in shining armor

The story of man hangs from a thread marked "water — how much? where? and how good?"

But most people don't realize that. They turn on their taps and as this precious resource runs into their sinks they think, "ho hum, there it is again," and down the drain it slips, an unappreciated hero.

Yet Southern Californians are utterly dependent not only on water but on *imported* water. And they must make vital water-related decisions at the polls.

Adults, however, aren't eager to change their ways. As long as that water keeps running from their taps, they aren't likely to give it much thought.

But water awareness and water-use habits begin at an early age. Metropolitan, no stranger to planning two and three decades ahead, wants to be sure coming generations aren't ignorant of this fundamental part of their day-to-day lives.

So the district set out to create a water awareness program for children. After several years of planning and much hard work, the program was introduced in 1983. By the end of 1984, the reviews were in: it's a hit.

Already hundreds of teachers across the Southland have been trained and are incorporating Met's education program into their lesson plans.

When the project was still on the drawing boards, Met's education coordinator realized that an education program might seem clever, look attractive, but might not be used by teachers, accepted by school districts or — worse yet — might not teach the intended message. The program had to be effective, but fun, too.

Classroom kits were developed for fourth and sixth grades, to tie water development into the regular teaching of California history. Kits include a teacher's guide, filmstrip, audio-cassette tape, class poster, pupil workbooks, tests to measure program effectiveness, leaflets for students to take home to parents, and stickers. Teachers receive these materials at an orientation meeting conducted by specially trained water-agency personnel.

Originally, the goal was to distribute 1,000 kits by the end of September, 1984, but by June of that year, the total was already passing 2,200. Of teachers who used the program, 97 percent indicated they wanted to use it again. And the district has received inquiries from water agencies and school districts beyond its service area seeking to purchase the materials.

Metropolitan is determined that the next generations of Southern Californians will be alert to the state's water situation, that these people will not turn on their taps, thinking "ho-hum," that this fundamental resource will be recognized for the hero it is.



## **L**n remembrance

Long Beach was just a wide spot on the ocean and a hopeful little community when Lloyd C. Leedom went there to live some 80 years ago. When he passed away last November at the age of 87, his home town had become one of the leading cities of Southern California — and more than a little of its success was due to him.

With nearly half a century spent in the business of Long Beach real estate, Leedom was a founder of the East Long Beach Industrial Improvement Association and served terms as president and director of both the Realty Board and the Chamber of Commerce.

He was a member of the Los Angeles County Resources and Reclamation Advisory Commission and served on the Long Beach Community Hospital board of directors for more than 15 years.

Just six years after water began flowing through Metropolitan's aqueducts, Leedom joined the district's board of directors. His 32-year tenure took him through the seven-year dry spell that stretched into the 1950s, the exploding growth of Southern California that had to be matched by Metropolitan, the initiation of the State Water Project in 1960, and the 1976-77 drought.

By the time he retired from the board in 1979, he had helped shape most of Metropolitan's history.

## *quick and to the point*

### **So much depends on the weather**

In a state where "average" rainfall is an exception, too much or too little can wreak havoc. But for the past year, the gods have smiled. Metropolitan Water District, on the financial ropes a year ago due to an overly wet 1983, resulting in low water sales, is now comfortably in the black thanks to good planning and some lucky weather.

### **A new fish + an old law = a big problem**

Mono County's Rush Creek has been dry most of any year since the 1940s when the Los Angeles Department of Water and Power (LADWP) was granted the right to dam the creek and divert water into the Los Angeles aqueduct system. But heavy runoff from snowpacks last year carried

thousands of trout from Grant Lake in the Sierras into Rush Creek.

Apparently inordinately fond of trout, a group of fly fishermen have slapped LADWP, one of Metropolitan's member agencies, with a lawsuit citing an old law requiring dam operators to leave enough water in the stream to keep healthy any fish below the dam. The Los Angeles utility, which would have to turn to Metropolitan to make up for water not available from Rush Creek, is preparing a major defense.

### **New water from old**

In one answer to supply problems, Walnut Valley and Rowland Area County water districts have begun construction of a distribution system to bring reclaimed water from Pomona to parks, golf courses, school grounds and other land-

scaping. Some 40 percent of all residential water in Southern California is used on landscapes. Three treatment levels produce clear, odorless reclaimed water that must meet federal, state and local safety standards for irrigation use. Separate distribution systems ensure that it cannot mix with drinking water.

### **Will lowering the level lower the price?**

Metropolitan, along with several other agencies, is exploring the possibility of constructing a 32-mile, low-level tunnel through the Tehachapi Mountains, which could save billions of dollars now spent on energy to pump water over the mountains. A preliminary study indicates such a project is mechanically feasible. Further study will weigh construction costs against energy cost savings.

### **A dam in time may prevent water woes**

As a hedge against emergencies, San Diego County Water Authority will construct Pamo Dam, the first major dam in the 30-year period that has seen the quadrupling of that county's population.

Voters approved the dam despite Sierra Club complaints that it would destroy a natural habitat for many protected animal and bird species. Native American groups protested that the resulting reservoir would flood burial grounds and destroy artifacts, and various civic groups fear expense and unwise development.

Nevertheless, a majority of voters obviously felt their water supply needed some insurance against drought and against any earthquake-caused rupture of aqueducts that bring the county most of its water from Metropolitan.

# H

ow can you be  
sure it's safe to drink?

Chemicals have a bad name — a reputation besmirched by several decades of chemical scares.

But we forget that man did not invent chemistry, nature did. And our comfortable American way of life relies on an array of chemicals for everything from soapsuds to gasoline.

One chemical is so well known we've forgotten it's a chemical:  $H_2O$ . The irony is that in nature there is no pure  $H_2O$ . All water is "contaminated" with other elements.

Some of these elements arrive in water as the result of civilization — pesticides, organic matter, trace metals. Others would occur regardless of man's activities.

When we drink a glass of water, regardless of its source, we are consuming a complicated alphabet of elements that has been recycling itself for billions of years. To be sure, most of that glass of water is hydrogen and oxygen in the expected proportions. But there are also as many as 100 other elements in that water.

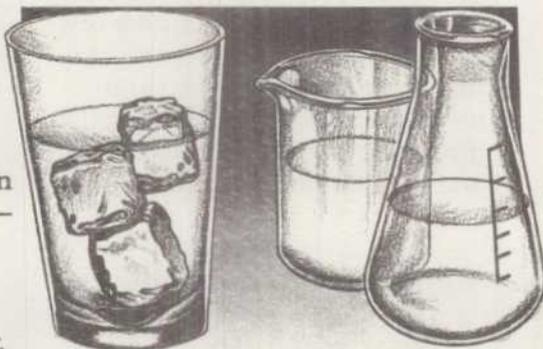
How can you be sure it's safe to drink?

How can you be certain your water contains no dangerous organisms, no chemicals in high enough concentrations to be toxic, no harmful elements?

The truth is, you can't.

There are precious few iron-clad guarantees beyond death, taxes and an eastern sunrise.

What you can have is a sort of educated confidence, in this case by learning something about the agency that provides your glass of water. Does it test its water daily in a sophisticated laboratory? Is the agency monitored by state and federal health officials? Has anything in the water ever caused serious illness? Does the agency



use state-of-the-art methods to seek out potentially harmful substances in the water?

Without some trust, based on the knowledge that certain things have rarely if ever let us down, insanity would lie just around the bend. When a road sign points to a city, we assume that road will take us there. We take it for granted that lifeguards know how to swim.

Not long ago, Metropolitan Water District, which provides about half the water consumed in Southern California, began using chloramines instead of chlorine to disinfect water. The change was prompted by the fairly recent

discovery that chlorine combines with otherwise harmless organics present in some water sources, to form a possible carcinogen. Chloramines, on the other hand, don't produce this substance.

Some people, however, are alarmed that anything at all is added to their water — especially anything with that nasty name "chemical." This feeling was compounded when Metropolitan temporarily suspended use of this disinfectant because some kidney dialysis centers weren't properly removing chloramines — just as chlorine has always had to be removed — from water used in this treatment for kidney-failure patients.

As soon as the human and mechanical errors that allowed chloramines to slip past filters in the kidney machines are corrected, the district will return to chloramines use because it makes the Southland's water safer for ordinary uses than it was before.

Water itself is a chemical and without a disinfectant — usually another chemical — the threat of waterborne diseases, such as cholera and typhoid, is very real.

During an average year, Metropolitan tests its water about 93,000 times. And the district's standards are often even tougher than state and federal requirements.

That ought to be worth a little confidence.

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## FOCUS

ON WATER

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