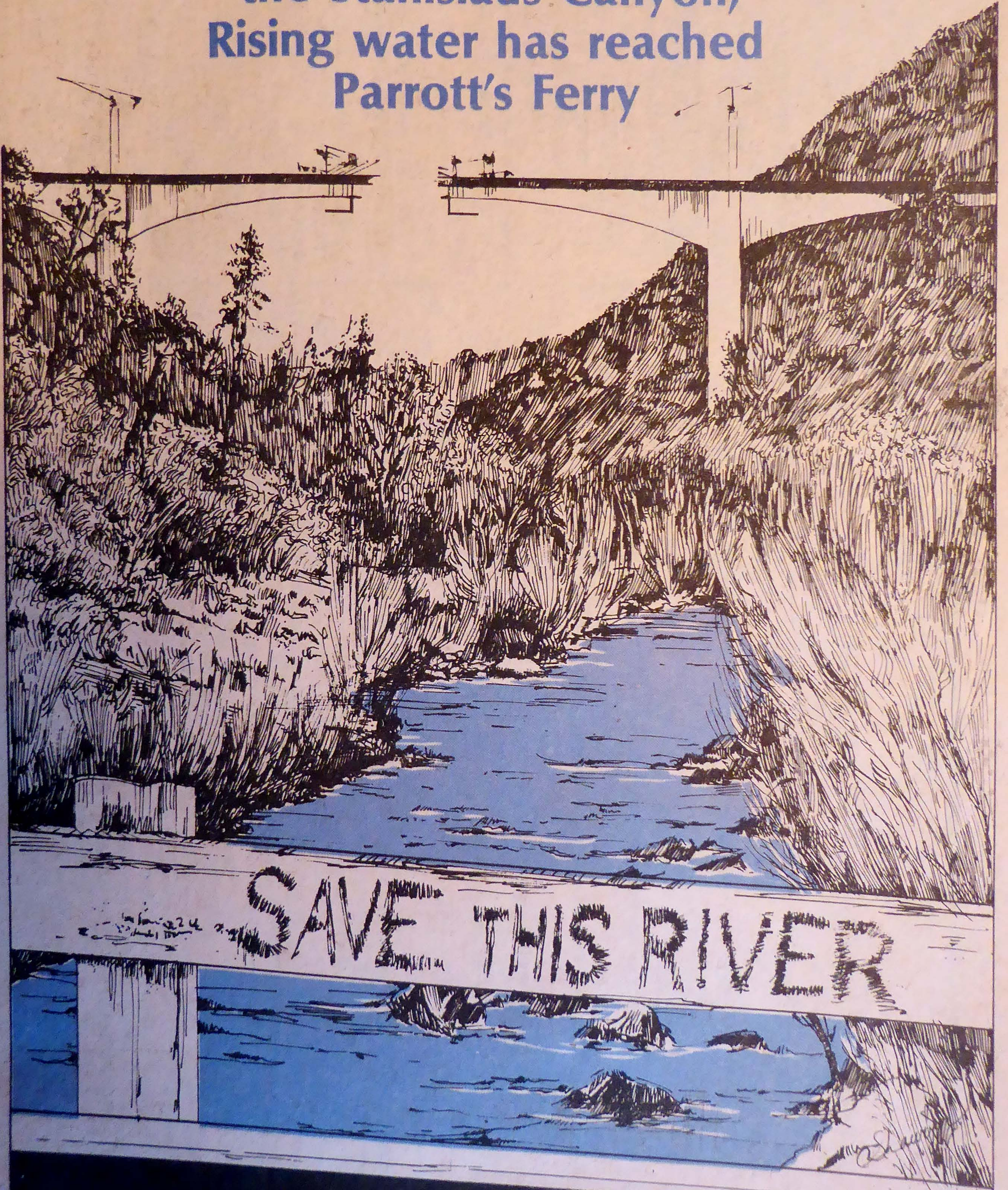


New Melones Dam is drowning
the Stanislaus Canyon,
Rising water has reached
Parrott's Ferry



HEADWATERS



How Do You Respond?

Yes, New Melones Dam is complete. But, NO; we do not have to complete the fatal folly of destroying all the joy and life of the Stanislaus River Canyon. This special edition of Headwaters attempts to summarize the values of the Stanislaus, articulate some of the alternatives to dams to satisfy our needs, and, most importantly, let you know how you can be involved in preventing the senseless destruction of the Stanislaus.

The Bureau of Land Management noted in their report on the Stanislaus in the fall of '78, "the whole is greater than the sum of its parts." The Stanislaus is a temple and a playground — more than 90,000 folks visited the Stanislaus last year.

The lower four miles of the Stanislaus, below Parrott's Ferry, has already been flooded. Parrott's Ferry is our limit. We hope you will join us in protecting the Canyon above Parrott's Ferry and in declaring an end to our battle with the American landscape. Our present standard of living does not have to be altered if we work together to find alternatives immediately.

The dam could produce less than 1% of the state's water and power. We are not yet so poor as to have to burn our cathedrals for firewood. The past decade has only begun to teach us of the treasures we might steal from our children if we allowed the flooding of the Stanislaus Canyon.

Twelve hundred dams in California are enough!

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The Case against the Dam
Wilderness & the Disabled

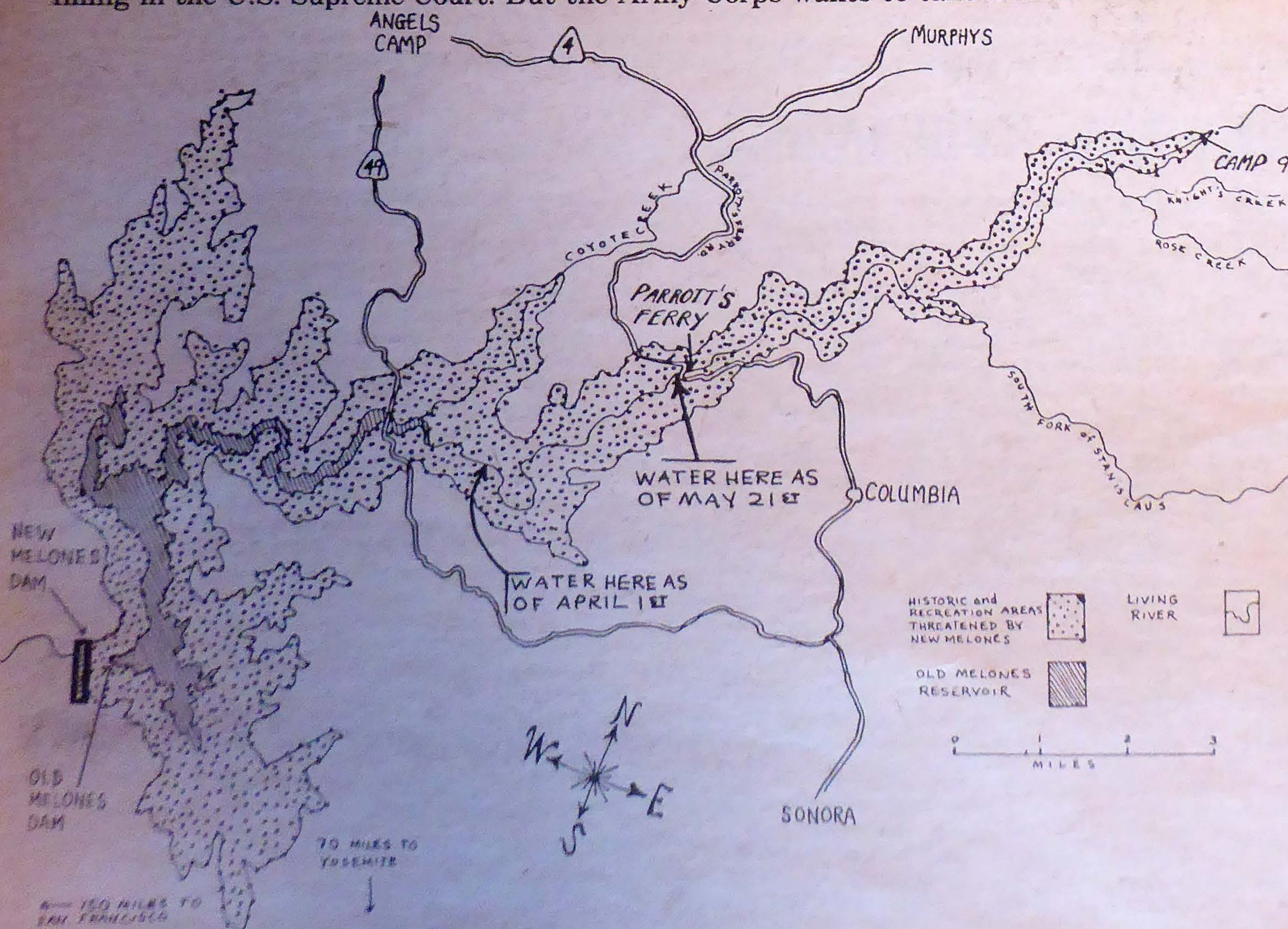
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The Soft Path: energy
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To Our Friends

New Melones Dam, shown here while under construction, has now been completed. The rising reservoir has reached Parrott's Ferry, the limit of the filling compromise advocated by environmentalists. The State of California supports partial filling and has won the right to limit filling in the U.S. Supreme Court. But the Army Corps wants to take more. . .





Headwaters

— Geoff Brown

From "Reinhabiting A Separate Planet"

From the highest places come the headwaters. They are the beginnings — not only the sources of every stream and river, slides or rock where the water trickles out, and pockets of grass and trees that stand along the highest ridges; but the very trees themselves, holding these headwaters in tension, keeping the water at their root-tips, drinking them only as they need them, until that day when the tree has had enough growth for a year, and lets the water slide down the mountainside, just in time so others may drink it.

It is a delicate balance in such a family that has evolved over epochs. Take away the rocks and the water; the soil, the trees fall away. Take away the trees, and the water has nothing to drink it up and goes washing away, the soil slides with it, and there's nothing to hold the rocks there either; they fall on their faces. Take away the headwaters, and you take away the source of any community. They are the last hope for a regained balance — in the watershed below, and in all the lands spreading out and curling away from them.

Headwaters is an association for the preservation of critical watersheds, well-springs and the "earth-households" below.

A community of clouds, rocks, trees, herbs, lichen, reptiles, mammals and mushrooms, not to mention birds and all the other creatures, that have lived together for eons, so know how to take care of their world, they have had to know, or it would have been desolate long ago.

Black earth drinks,
& the tree drinks her.
Trees pump water,
& the sky drinks it back.
The mountains milk it,
the sky lets fall,
& the rivers roar;
The sea drinks torrents,
& the sun the sea!
& the moon the sun —
The moon flies high
over my head,
myself also wishing
to drink.



In our efforts to frame some principles by which to identify "conservation" and "nonviolence," we have found that the two concepts are two sides of the same coin. Both are loose sets of ideas that depend on personal and moral responsibility to guide the actions of the individual or the society. Both represent an attitude toward the earth and its many inhabitants — human, animal and plant. In these articles you can explore the development of the two concepts and draw your own conclusions about their possible relationship.

The Land is Our Community

Aldo Leopold — from the forward to a Sand County Almanac

Like winds and sunsets, wild things were taken for granted until progress began to do away with them. Now we face the question whether a still higher "standard of living" is worth its cost in things natural, wild and free. For us of the minority, the opportunity to see geese is more important than television, and the chance to find a pasque-flower is a right as inalienable as free speech. These wild things, I admit, had little human value until mechanization assured us of a good breakfast and until science disclosed the drama of where they come from and how they live. The whole conflict thus boils down to a question of degree. We of the minority see a law of diminishing returns in progress; our opponents do not. Con-

servation is getting nowhere because it is incompatible with an Abrahamic concept of land. We abuse the land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect. There is no other way for land to survive the impact of mechanized man (and woman), nor for us to reap from it the esthetic harvest it is capable, under science, of contributing to culture.

That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics. That land yields a cultural harvest is a fact long known, but latterly forgotten. Such a view of land and

people is, of course, subject to the blurs and distortions of personal experience and personal bias. But wherever the truth may lie, this much is crystal-clear: Our bigger-and-better society is now like a hypochondriac, so obsessed with its own economic health as to have lost the capacity to remain healthy. The whole world is so greedy for more bathtubs that it has lost the stability necessary to build them, or even to turn off the tap. Nothing could be more salutary at this stage than a little healthy contempt for a plethora of material blessings. Perhaps such a shift of values can be achieved by reappraising things unnatural, tame and confined in terms of things natural, wild and free.

"... And For All Our Relations"

Dennis Banks
at the Wild River Confluence

In October of last year, I was called to listen to testimony from Dow Chemical and state officials concerning the proposed petrochemical plant near Pittsburg. The thing that remains with me the most was the lengthy presentations by the representatives of Dow about how the plant was going to create employment in the area. Toward the end, they admitted that they might kill a few fish.

In my culture during the planting ceremony, during the ceremony for good health, at the end of your prayers, there's one line that's a reminder of who we are, a reminder of what we owe to Mother Earth. In place of the end of a Christian prayer AMEN, Native American people say, "... and for all my relations." Because our relations are the winged things, the four-leggeds, the fish and all of the plants, we know that we can't survive without them. The longer I live, the less important I feel in this whole scheme of life. I know that our relations can exist without us. When the man from Dow said that we might kill a few fish, I began to think back in history of what some of the words might have been when they began proposing industry and other types of "progress"

in this land. They might have said, "Well, we might kill a few buffalo, we might kill a few deer, we might kill a few eagles." All of these relations have done nothing to harm us, yet we continue to build; we continue to destroy, and kill our relations. So when I heard the man from Dow say that we might kill a few fish, I knew that part of my priorities would be to speak for our relations, that I would have to pledge the remainder of my life to maintain what is right for our relations.

The source of life is water; the source of purification is water. We depend for water in our prayers in the ceremonies. When each cup hits the rocks, we say a prayer for the nations. We believe there are Rock Nations; we believe that there is a Tree Nation. We believe that there are Beaver Nations. We believe that there are Elk Nations. Each of our relations has its own language. Each of our relations has its own way of praying, its own way of living. So as human beings, we must be the monster to our relations. They have kept us alive. Crow Dog of the Rosebud Reservation, a medicine man who's guided my life for many years, said, "Our relations have done nothing

done nothing to hurt us; when our relations call us to the court, I don't want to be around when they find us guilty. I don't want to sit and be a defendant. I don't want to be accused for our people." When Crow Dog says "for our people," he means for the four races of man: the yellow, the red, the black and the white. The four sacred colors.

We have to examine what industry means, define what "progress" means in terms of our relations. What do our relations have to say? In Ohio, there's a river called the Cuyahoga. It has been used by the Unitas, the Senecas. It was a beautiful river, but it's not so beautiful today. Today this river is patrolled by fire engines so that it does not catch fire. When they asked me what have Indian people done in terms of progress, I looked at the Cuyahoga and say, "Maybe not much. At least we never made a river flammable." We never killed a few fish in the name of progress. We prayed for our relations on the Mississippi, or on the Missouri, or on the Klamath, or on the Stanislaus. We pray to them because they have given us this day.

Why We Will Win... Bob McBride

At times we are confronted by folks who think that what we work for is nice, but simply stands in the way of human needs. People have resisted New Melones Dam for over a decade, and we believe that not filling this dam is closer to the maximum meeting of human needs than filling it. Water and energy conservation, and decentralized technologies appropriate to the scale of human needs and uses, rather than those of the scale of greed, would not force us to destroy the earth in order to have full lives. Witnessing the destruction of our human heritage and our living animal and plant relations at our encampment has focused our senses on the human need to become aware of our earthly community. For many of us, through the last decade, the Stanislaus has been a first step into this community. Different people are considering various actions to defend this community.

Nonviolent action, our tactic, is not threatening or repressive. It has in the past been proven to be persistent and powerful. Pro-

testing, lobbying, physically intervening, or writing a letter to a congressman exerts pressure without antagonism. Our ends must be reflected in our means: violence or angry confrontation may seem to reap quick results, yet after a war is won it is difficult to abolish our guns or forget our lasting anger. Vengefully "winning" a victory by a lawsuit or by a technicality such that public sympathy turns against ten other issues is no victory at all.

We believe that the truth of our statements will make us win. When our intention is to be honest, open and friendly, we are using our most powerful weapon. In debate or other public conflicts, our success will be measured by our ability to hold onto the truth. Our opponents have every opportunity to convince us they are right. We are willing to endure long hours and sacrifice to engage in long debate or more tedious political work. Some may go to jail for placing themselves as a disruptive yet nonviolent presence amid the "regular" functioning of a wasteful and destructive way of

life. People are willing to accept hardships as a substitute for violence and/or the destruction of the living canyon.

We have met the enemy, and he is ourselves. "Business as usual" involving destruction of living places is the rule in an age out of harmony with human nature and the earth. In order to act as whole, loving persons, it is necessary to change our habits to come into harmony. We do not need to look to others to save us; we need to become the change we want to see in others. We need to say "yes" to alternatives to dams to meet our needs. We need to say "Yes" to the land, and to all our relations. In doing these things, we will be increasing our chance to save the Stanislaus. In saying yes to the land and all our relations, we become part of the earthly community. Because people will learn the ways of this community or perish, because this community supports the people who stand outside it and will outlive them, because of the healing power of this community — full dam or no — we will win. Because we hold onto the truth, we will win.

Out of respect for all our human, animal, plant and rock relations, we see the earth as a community to which we belong. We will not just our own lives to decrease our demands for natural resources, including land, water, living organisms, minerals and energy, in order to allow for the preservation of this community.

- we will be friendly and open to all whom we encounter.
- we will not destroy land or private property.
- we will not physically or verbally abuse anyone we encounter.
- we will carry no weapons, drugs, or alcohol during our actions.



Encampment Moves Upstream

Since late March, the Witness and Encampment to the destruction of the Stanislaus has moved upstream as new stretches of river have been stilled by the rising reservoir. Over 800 people have visited during this time, and each of us has been treated to first-hand experience of the destruction of a living land. In our witnessing of the drowning, the encampment continues to be an opportunity for us to join the canyon and let our emotions cry out over the death of a sacred place. Through the experience, many of us are beginning to see the patterns of waste and disregard for the planet and our future that the New Melones Dam is part of.

There may be several "affinity groups" encamped; the plan is for there always to be at least one. The Witness and Encampment is organized in groups in order to help each other insure that we do no harm to the canyon, its

artifacts, or its life, and to let us share an experience which can bind us together in our dedication to the protection of our land and resources.

Contact FOR and arrange a pre-Witness orientation on logistics and purposes, and the political situation on the Stanislaus.

A special wildlife rescue program has, with the help of the Marin Wildlife Center, been recovering animals which would have otherwise drowned in the rising water as the many small islands formed and subsequently submerged. Bird's nests, rabbits, rattlesnakes, lizards and a variety of rodents and other small mammals have been recovered so far. Participants can see for themselves the destruction of entire communities. There is plenty of work. Saving lives has its own rewards. Please join us. Contact Susan Brooks at (415) 388-6908.

Hope For the Stanislaus National Wilderness?

The Bureau of Land Management has submitted the Stanislaus River Canyon as possibly eligible for study as a wilderness area and ultimately for inclusion in the National Wilderness Preservation System. **THIS IS THE TOOL THAT CONGRESS COULD USE TO PRESERVE THE STANISLAUS ABOVE PARROTT FERRY.** Natural condition and unique appearance in terms of wilderness are the criteria the canyon must meet. At a series of meetings held March 19-29, river lovers spoke in favor of protecting this area's unique assets and outstanding opportunities by including it in the wilderness study of BLM lands. After the public comment period, po-

tential Wilderness Study Areas will be identified, and there will be a subsequent 90-day comment period ending about September 30.

Comments should be directed to the criteria of the Wilderness Act, 1964:

- 1) General naturalness of the area: "... appears to have been affected primarily by forces of nature, with the imprint of man's work substantially unnoticeable. ..."
- 2) "Outstanding opportunities for solitude or a primitive unconfined type of recreation."

Please write: Bureau of Land Management, 63 Natoma, Folsom 95630. Help create the Stanislaus National Wilderness Area!

Direct Actions Planned

On Tuesday, May 8, 40 Tuolumne and Calaveras County residents attempted to remove with shovels and crowbars a pile of rocks that had been placed across the Old Parrott's Ferry Road. They were turned away by Calaveras County Sheriffs sent to guard their pile of dirt. Unthwarted, the group planted trees from the flooded lower canyon instead.

As a coordinator for small group direct action and civil disobedience in defense

of the Stanislaus, we applaud this group for their calm and nonviolent reaction to a potentially dangerous situation. While Friends of the River will not directly participate in any civil disobedience, we hope that our two groups can work toward the common goal. PFNDAC is planning a spring campaign for the Stanislaus. For further information contact Alexander Gaguine at

(209) 532-8067.

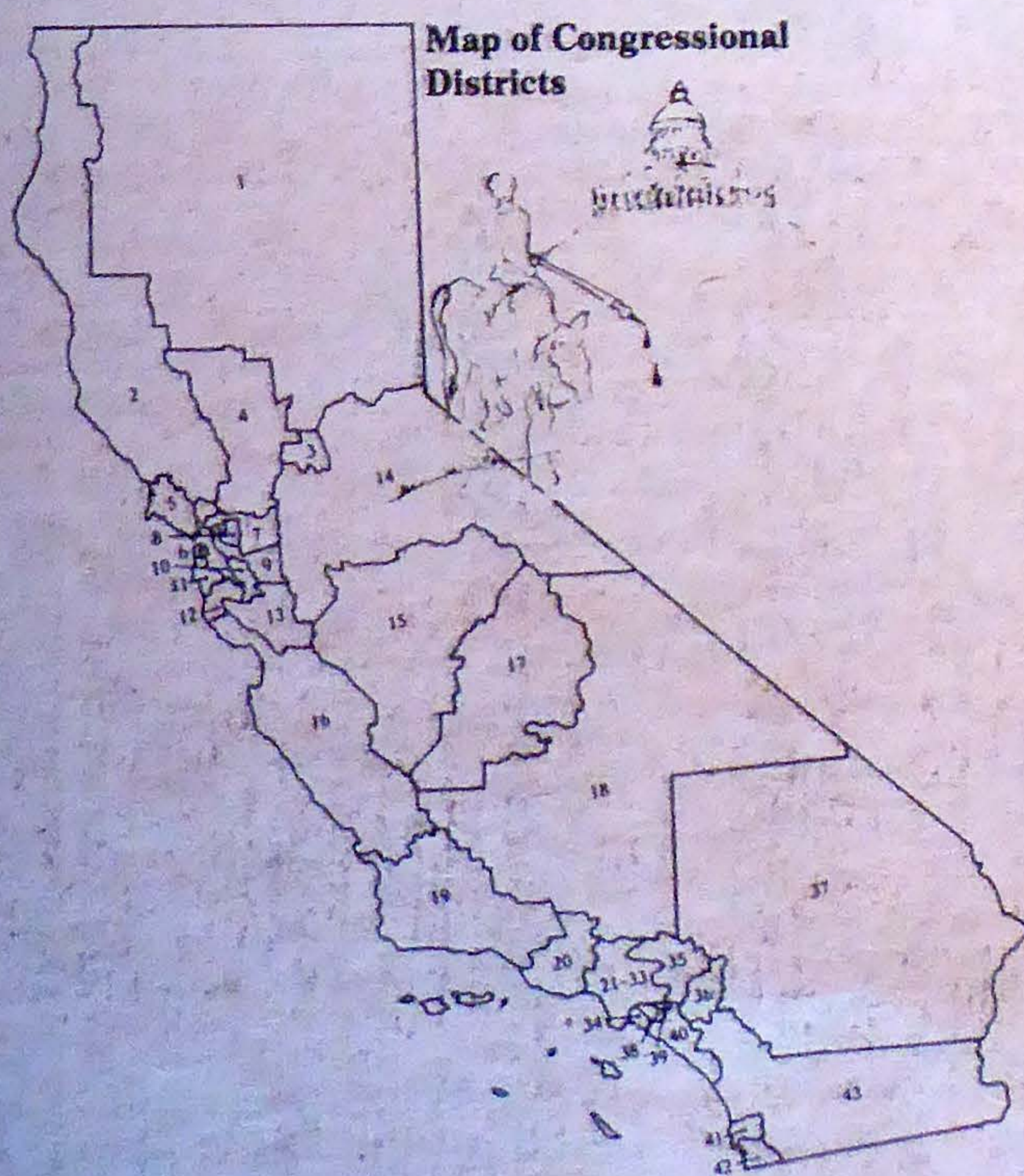
While the state can halt the filling temporarily, permanent protection for the Stanislaus above Parrott's Ferry will have to come from Congress. A national monument, wild and scenic river status, or a BLM Wilderness Area are but a few of the options for Congress to save the river and canyon. The majority of Californians want the canyon saved, but our representatives in Washington can't hear a silent majority 3000 miles away. Many of them do know of the issue but haven't been presented all the facts. Others have not heard enough from their constituents. If we want a living canyon, we're going to have to send our message loud and clear to reach them. At least one senator and half the representatives have to be with us before any will author a bill that has a chance of success. Eighteen have already signed or written letters to Interior Secretary Cecil Andrus urging him to protect the cultural resources of the canyon, and many have asked for full protection above Parrott's Ferry. If your representative has already helped, thank him and urge his support to continue.

"What can I do?" you ask. Write them. Call them. Visit them. Ask their position and any special questions you might have. We can help with information, or you can use our slide show to present to your friends, club, religious group, or Congressmen. When writing, ask for a written reply. Write again and follow up on your questions with a positive approach. Ask them what they need to co-author a bill to save the Stanislaus. Go for it!

In ten minutes you can speak for hundreds of your silent friends and neighbors. Write your Senator and Representative. Do it now, tomorrow the river and canyon will be gone!

Senators

NAME	PARTY	DISTRICT ADDRESS
Cranston, Alan	D	1 Hallidie Plaza, San Francisco 94102 10960 Wilshire Blvd., Los Angeles 90059
Hayakawa, S.I.	R	1390 Market St., San Francisco 94102 523 W. 6th St., Los Angeles 90012



Congressional Delegation

NAME	PARTY	DISTRICT	DISTRICT ADDRESS
Johnson, Harold	D	1	320 Vernon St., Roseville 95678
Clausen, Don	R	2	216 Eureka Inn, Eureka 95501
Matsui, Robert	D	3	1340 Gagie Way, Sacramento 95831
Fazio, Vic	D	4	1640 7th Ave., Sacramento 95818
Burton, John	D	5	450 Golden Gate Ave., San Francisco 94102
Burton, Phillip	D	6	450 Golden Gate Ave., San Francisco 94102
Miller, George	D	7	P.O. Box 277, San Pablo 94806
Dellums, Ronald	D	8	2490 Channing Way, Rm. 202, Berkeley 94704
Stark, Fortney	D	9	7 Eastmont Mall, Oakland 94605
Edwards, Don	D	10	38750 Pasco Padre Pkwy., Fremont 94536
(vacant)		11	
McCloskey, Paul	R	12	305 Grant Rd., Palo Alto 94306
Mineta, Norman	D	13	1245 S. Winchester Blvd., San Jose 95128
Shumway, Norman	R	14	1555 W. Seville Ave., Stockton 95207
Coelho, Tony	D	15	1728 E. Alexander Ave., Merced 95340
Panetta, Leon	D	16	380 Alvarado St., Monterey 93940
Pashayan, Charles	R	17	748 E. Holland, Fresno 93704
Thomas, William	R	18	1910 Alta Vista, Bakersfield 93305
Lagomarsino, Robert	R	19	814 State St., Santa Barbara 93102
Goldwater, Barry	R	20	266 N. Mobil St., Camarillo 93010
Corman, James	D	21	14545 Friar St., Van Nuys 91411
Moorhead, Carlos	R	22	420 N. Brand Blvd., Glendale 91203
Beilenson, Anthony	D	23	1100 Wilshire Blvd., Los Angeles 90024
Waxman, Henry	D	24	8425 W. 3rd St., Los Angeles 90048
Roybal, Edward	D	25	300 N. Los Angeles St., Rm. 7106, Los Angeles 90012
Roussiot, John	R	26	735 W. Duarte Rd., Arcadia 91006
Dornan, Robert	R	27	1100 Wilshire Blvd., Los Angeles 90024
Dixon, Julian	D	28	101 N. LaBrea, #301, Inglewood 90301
Hawkins, Augustus	D	29	936 W. Manchester Ave., Los Angeles 90044
Danielson, George	D	30	8873 E. Valley Blvd., Rosemead 91770
Wilson, Charles	D	31	15000 Aviation Blvd., Lawndale 90261
Anderson, Glenn	D	32	300 Long Beach Blvd., Long Beach 90801
Grisham, Wayne	R	33	15124 Greenworth Dr., La Mirada 90638
Lungren, Dan	R	34	4436 Gardenia Ave., Long Beach 90807
Lloyd, Jim	D	35	100 S. Vincent, Suite 507, W. Covina 91700
Brown, George	D	36	552 N. LaCadena, Colton 92324
Lewis, Jerry	R	37	6380 Bradford St., Highland 92346
Patterson, Jerry	D	38	34 Civic Center Dr., Santa Ana 92701
Dannemeyer, William	R	39	834 Grandview Ave., Fullerton 92632
Badham, Robert	R	40	1649 Westcliff Dr., Newport Beach 92660
Wilson, Bob	R	41	66315 Federal Bldg., San Diego 92101
Van Deertlin, Lionel	D	42	815 E. St., San Diego 92101
Burgener, Clair	R	43	85523 Federal Bldg., 880 Front St., San Diego 92101

the case for saving the canyon

Magic of the Canyon

Words scarcely capture the magic of the canyon: the exhilarating rush of white water boating... the mystery and fascination of sitting by a Miwok Indian grinding rock under an oak tree... examining an ancient rock wall built by a gold-hungry miner from another country... the breathtaking beauty of sheer limestone cliffs... the overpowering silence and darkness of sitting in a cave... the joy of pretending to be a fish dancing in the warm pools of Rose Creek... being overcome by the collage of spring's wildflower colors and smells... camping under a myriad of stars with camp fire dancing on the nearby cliffs... observing a beaver or water ouzel... or sensing all the life that has evolved over the millennia. This is why Parrott's Ferry is our limit.

Recreation

In support of its project, the Army Corps anticipates four million visitor-days a year for New Melones Reservoir. An optimistic estimate? Possibly — by contrast, Yosemite National Park had 2.6 million visitor-days of recreation in 1978. Currently the Stanislaus River is the most popular white-water boating west of the Mississippi, according to the Bureau of Land Management. Together, the Stanislaus River and Old Melones Reservoir register 135,000 visitor-days per year for boaters, anglers, hikers, picnickers, spelunkers and swimmers. Handicapped recreationists use the Stanislaus because it is uniquely accessible, a use that cannot be recorded in terms of visitor-days. Eleven existing reservoirs within 30 miles of the Stanislaus can accommodate any increased demand for flatwater recreation in the next 50 years, according to the federal Water Resources Council. "Full impoundment of New Melones would eliminate recreational values which cannot be duplicated anywhere, especially within easy access to major urban populations at affordable costs," says the Bureau of Land Management.

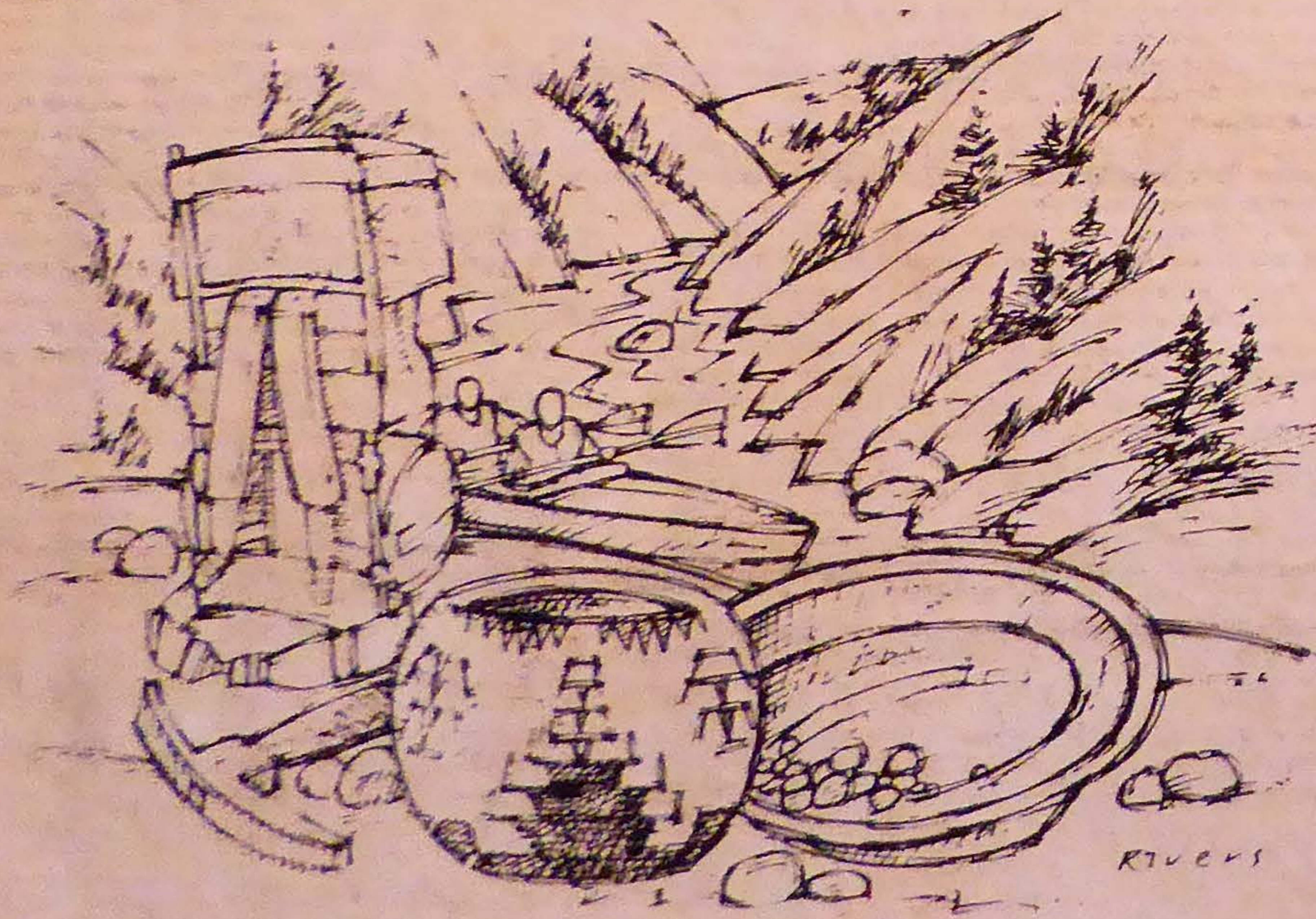
There are 120 dams in California — there is only one Stanislaus River Canyon.

Streamside Flora & Fauna

Remnants of an ancient nationwide deciduous forest grace the riversides of California. In the early 1800s this streamside forest covered 775,000 acres, with individual trees reaching 27 feet in circumference. Currently only 12,000 acres of this forest remain. Fifteen more miles of streamside would be inundated by the total filling of New Melones; partial filling to Parrott's Ferry would preserve ten miles of this. Downstream of New Melones, additional streamside forest would be devastated by drought and development of the floodplain if the dam were completely filled. Virtually none of these forests in the state are protected, and the many more dams, canals and channelizations of rivers and creeks that the Army Corps, Bureau of Reclamation, State Department of Water Resources and other water agencies and flood control districts plan cast a shadow over most of it. Not filling New Melones Dam completely is one of the last chances we have to keep a living memory of the once-great "gallery forests."

Historical Value

The canyon contains between 600 and 700 significant, undisturbed archeological sites, all eligible for the National Register of Historic Places. Since these sites are both relatively concentrated and also relocatable to their original, immediate environment within the Sacramento-San Joaquin Delta. A maximum of 450,000 acre-feet of potential storage behind New Melones Dam is required for flood control. Only partially filling the reservoir will meet this goal. This amounts to 1/3 of one percent of the state's power use. As a contrast, the energy for heating water wasted by inefficient shower heads without flow restrictors amounts to three times the power produced by New Melones, according to a study by Lawrence Berkeley Labs. The state Energy Commission estimates that government buildings alone waste five times the power that New Melones could produce by using lights requiring more wattage than needed and by installing lights near windows and skylights. This is but a fraction of the energy that could be saved without any personal sacrifice by consumers. It has even been estimated that all of the New Melones power would be required merely to pump the water that would be delivered if the dam were filled.



Memorandum from Major General R.H. Groves of the Army Corps of Engineers:

SUBJECT: IMPROPER TERMINOLOGY

"I am observing a growing trend in the use of the verb 'to feel.' Please avoid its use in any paper that you prepare for my signature. Any action that I take is supposed to be objective, emotionally sterile and totally devoid of all feeling... Please see that your work for me is purged of this offensive word."



wilderness & the disabled californian

The Stanislaus River Canyon provides the only feasible roadless wilderness experience for Northern California's large and growing disabled population. How can this be true given the slowly increasing numbers of wheelchair accessible trails and the proximity of Pt. Reyes, Mendocino, the Sierra Foothills and the American River? First, you must understand that white water river trips, like no other recreational therapy, bring the disabled person back into harmony with the natural environment.

As a recent paraplegic I thought the wilderness was one of those active pleasures, like dancing and baseball, I would consign to memory. All this changed after my first rafting trip on the Stanislaus. Since then I have helped organize numerous camping trips for other physically limited outdoor women and men, tested my chair on three of California's newly accessible trails and begun working with John Olmstead on his whole access National Heritage Corridor. I was the first person in a chair to "climb" the Ecological Staircase at the Jug Handle Creek's Institute for the study of Man in Nature in Mendocino. Fine as they were, none of these post-river excursions provided wilderness access comparable to the Stanislaus Canyon.

What is so extraordinary about white water rafting to justify so extravagant a claim? First of all, river trips create families, which in turn establish the trust necessary for a disabled person to experience herself as a contributing participant in wilderness survival. While our physical limitations necessitate our reliance on able-bodied friends for water safety and a range of personal services, we disabled are not a mite less essential to a river trip's success than each boat captain. Not only do we eagerly chip in whatever we can offer to group chores (pumping up boats, preparing meals, cleaning up, breaking camp and eventually washing down and deflating the rubber rafts), we also contribute a subtle expertise more essential to the success of a river trip than any rock-dodging raft maneuver.

Our potentially infantilizing dependency frequently places our egos in great jeopardy. As we grow accustomed to taking these private risks, we develop the skills necessary to communicate our needs clearly — not only what we need, but how much and how soon. This helps establish a climate of mutual respect in which personal services can be performed and accepted with no loss of dignity to either party.

This expertise in interpersonal relations plays an integral part in establishing the spirit of trust and cooperation without which the disabled would find no access to the wilderness. Responsibility for our respective limitations and conscious embrace of one another's skills provide the human ecology essential for a disabled person to feel at home again in the natural environment. These are lessons we became conscious of on the Stanislaus because that complex riparian habitat is both mirror and model for our human ecology. The river and the canyon through which it runs became for us a wilderness cathedral, as though God himself had fashioned a monument capable of teaching the creatures with whom He peopled the earth all they need to know to preserve their many cultures and the planet we glorify and plunder daily. In the Stan canyon water drips through dry ground, slowly adding centimeters to the stalagmite candelabra of a living cave; layers of sedimentation record the history of the planet, and even the decaying carcasses of trees and other forest creatures contribute to the endless regeneration of life. If we taught one another about the sweeter uses of adversity as we "recycled" our respective arenas of expertise to produce a new human community, the river and the canyon through which it flows was our greatest teacher, reflecting as it did in awesome scale the miracle of our complex interdependence.

All due respect to the poetics of free-flowing rivers and the spiritual resources of riparian habitats, you might rejoin, "But there are other California rivers on which the disabled and able-bodied could interact with similar sociology." Not so! None of California's rivers provide feasible access to roadless wilderness. The only comparable river avenues to back-country wilderness are the distant and prohibitively expensive Colorado Rogue and Salmon rivers. The American is bound by roads and the Tuolumne, too technically difficult for the severely disabled. If the Bay Area supplies recreational therapists and environmental educators — the teaching assistants on whom most disabled depend for wilderness accessibility — the Stanislaus alone provides the canyon classroom where the disabled relearn their place in the natural environment.

— Mary Regan

the case against filling the dam

Electric Power

New Melones Dam, if filled completely, could provide up to 430 kilowatt-hours of electric power, or as much as 300 million watts during times of peak power use. This amounts to 1/3 of one percent of the state's peak power use. As a contrast, the energy for heating water wasted by inefficient shower heads without flow restrictors amounts to three times the power produced by New Melones, according to a study by Lawrence Berkeley Labs. The state Energy Commission estimates that government buildings alone waste five times the power that New Melones could produce by using lights requiring more wattage than needed and by installing lights near windows and skylights. This is but a fraction of the energy that could be saved without any personal sacrifice by consumers. It has even been estimated that all of the New Melones power would be required merely to pump the water that would be delivered if the dam were filled.

New Water Supply

The only real reason to fill New Melones is to provide more water to irrigate fields in the Central Valley. Yet if farmers were to save only 2/3 of one percent of the water they now use, this could offset the yield of New Melones that would be lost even if it were never filled at all. The Bureau of Reclamation itself admits that there is already a surplus of water in the Central Valley Project.

Fish

According to the California Department of Fish and Game, the population of King Salmon that spawns on the Stanislaus downstream of Goodwyn Dam would be reduced by 90% if New Melones were filled and operated as planned. This amounts to a loss of \$300,000 a year to commercial fisheries. Releases of water for fish, according to the year-to-year natural fluctuations of the river, are provided for in the Parrott's Ferry alternative. Also, the releases currently planned would not be sufficient to drive the fingerling salmon to the ocean in the spring; the Parrott's Ferry alternative would.

Flood Control

New Melones Dam will provide protection to approximately 35,000 acres of the floodplain of the Stanislaus (most of which is prime agricultural land; some of which is suburban development) and, to a very small degree, to lands along the lower San Joaquin River and within the Sacramento-San Joaquin Delta. A maximum of 450,000 acre-feet of potential storage behind New Melones DAM is required for flood control. Only partially filling the reservoir will meet this goal.

Limestone Caves

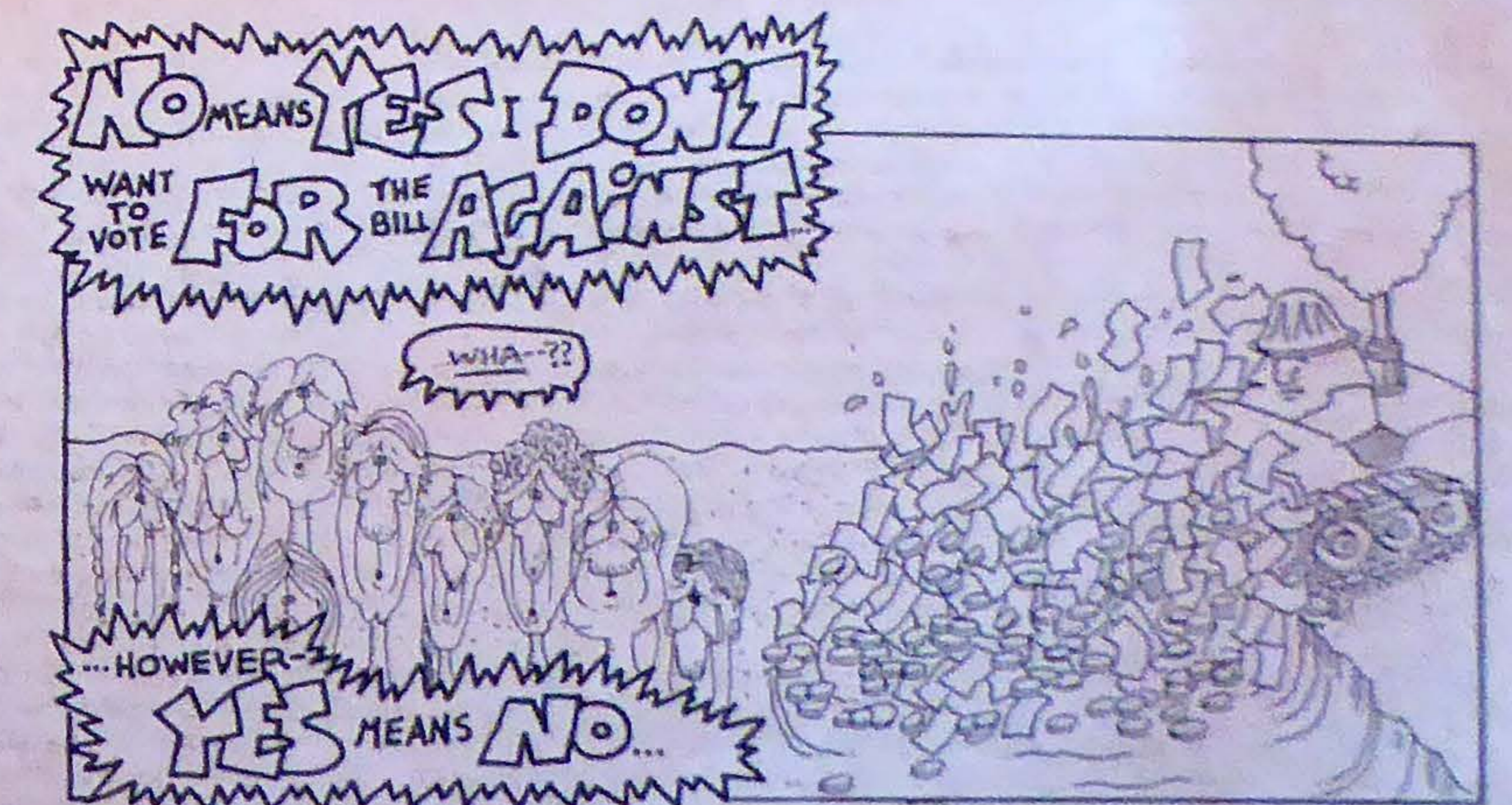
There are 31 known caves which would be inundated by a full reservoir behind New Melones Dam. One of them contains several rare species of spiders and supports a diversity of life possibly unparalleled in any other cave in California. The Calaveras Formation of the Stanislaus Canyon are the oldest exposed rocks on the western slope of the Sierras. The sediments on the floors of the Stanislaus caves are some of the best records of the past natural history of the Sierras that exist.

Certain caves are a "last opportunity" to recover data about the ecology of the ice ages, since they may be the only complete stratigraphic record of the area.

The caves exhibit virtually all interesting geologic forms that appear in limestone. Such caves are rare in the west, and nowhere else is a cave visit a routine part of as popular and diverse a wilderness visit.

Water Quality

Using reservoir water to dilute agricultural wastewater heavy with chemical fertilizers is a less permanent solution than saving water, fertilizer and soil by not overirrigating to begin with. Even so, filling the dam only to Parrott's Ferry can provide all of the water needed to improve water quality downstream. The Parrott's Ferry alternative meets the needs described by the state and federal governments.



The last pre-election survey by the Los Angeles Times regarding Proposition 17, the statewide ballot initiative sponsored by Friends of the River in 1974, showed us winning by a thin 2%. But after:

- photos showing fish floating belly-up on other rivers falsely represented as the Stanislaus;
- TV ads showing the screen blacking out, dramatizing the consequences that were to hit if the dam were not built, even though the dam would supply only 1/3 of 1% of the state's power;
- billboards in red, white, and blue saying "Stop the 'Wild River' Hoax! VOTE NO ON NO. 17, Stop pollution of the River!"

... PRESTO! Proposition 17 lost by 53% to 47%. Afterwards, a poll showed that 59% of the people who voted had intended to vote against the dam! \$175,000 had been given to "People of the River" (our opponents) by the construction contractors for the dam. They outspent us over four-to-one during the campaign. This time around, let's not be fooled.

Moving Towards a Soft Path

— Bob McBride

Two years ago, Amory Lovins of Friends of the Earth presented his "Energy Strategy: The Road Not Taken" as an article in *Not Man Apart*. Lovins compared the "hard" energy path of large, costly, centralized and destructive energy technologies to the "soft path" of energy conservation, decentralized technologies matched closely to their ultimate use and projections of future energy demands that reflect our residence on a planet of ample yet finite resources. A similar "hard path" of dams and canals is destroying the remaining rivers, creeks and other natural waterways of the nation. Pulling together the many cries for energy and water conservation, alternative water policies and no more dams, we contribute this page to the search for a "soft water path."

Water is the most critical resource in the west. Cities such as Los Angeles exist on arid land because of the development of large dams and canals. Agriculture in the west is nearly totally de-

pendent upon irrigation made possible by large dams and canals. Billions have been made in land speculation by Southern Pacific, Bank of America, Tenneco, Texaco, Dow Chemical and others who were able to acquire veritable empires "dirt cheap" and enjoy government subsidies of irrigation water which raised land values up to \$1000 per acre. Twenty-five percent of the state's electricity is generated on the many dams fitted with turbines. With the full support of a spend-thrift Congress, many more dams and canals are planned, enough to turn most of our few remaining rivers to chains of muddy water storage pools.

Is this the best use of our wilderness and our money? Here are some of the reasons that dams are still built and a peek at some of the institutions that build them. Here are some of the alternatives being considered by some folks — alternatives that can offer us a future with wild rivers and wilderness as well as water and power.

Agricultural Water Conservation

Eighty-five percent of the water used in California is used by agriculture. Two-thirds of this, or over half the total, is used to irrigate feed for livestock and poultry. Conserving two-thirds of one percent of this 32 million acre-feet per year (an acre-foot is the amount of water need to cover an acre a foot deep) would offset any losses that might occur if New Melones Dam were never filled. But conservation is not being exercised. Government subsidies are the reason why farmers don't save water; it is so cheap to the farmer that there is no incentive not to take more than you need. Yet the technology and skill to save water in agriculture are ready to be put in place.

Studies in Israel have shown that as little as one quarter of the water used in California can produce at least as much crop yield under similar growing conditions. Experts at the University of California and the State Department of Water Resources have determined that we can reduce evaporation losses from irrigated agriculture by at least five percent. This amounts to a savings of over one million acre-feet a year.

Research by the U.S. Salinity Lab and others demonstrates that we can reuse brackish water recovered from overirrigation to grow salt-tolerant plants, saving conservatively another million acre-feet. Economists, including those at the UC Water Resources Center, have shown that an additional three to five million acre-feet of water can be reallocated, or resold by ranchers and farmers, to users that pay higher prices. Then, the farmers make money and the new buyers save money over what it would cost to develop new water supplies.

Estimates of possible agricultural water conservation have been overly conservative

due to an erroneous set of assumptions about the total water cycle. It is accepted that all water that is applied to a field and does not evaporate or transpire or percolate to a saline groundwater will get re-used downstream in a watershed. Some of the water runs directly off the field as "return flow," some becomes part of the ground water. While some of this water may be recovered, there has been almost no accounting for the severe decay in the quality of water which has collected chemical fertilizer residues. This decay has been documented as roughly ten times for the first "cycle" — the quality of water decays ten times over from its first re-use! Currently a "Master Drain" is planned on the west side of the San Joaquin Valley to recover this wastewater and deposit it in the Sacramento-San Joaquin Delta at a cost of \$800,000,000. But studies have shown that a reduction in the water applied to fields is the cure to salinity problems, not the chronic overirrigation and waste which the water agencies and government bureaucracies have stood behind.

A second and major hole in the regular analysis of the irrigation water cycle is that the groundwater must be pumped from the ground. Since wells can cost hundreds of thousands of dollars, depending on the depth of the water table, small farmers, have much less access to this "re-used" water. Energy impacts of pumping, pollution by chemical fertilizers, weathering of soil minerals by overirrigation and an increased salt load in the excessive irrigation water itself are not considered in the models of "re-use" that have been put forth.

In short, California does not need to develop additional supplies of water. What we do need is to bring about water conservation and efficient water use in agriculture.

Energy Conservation

One quarter of California's electricity is generated by turbines at dams. Power developers hope for some 68 more major dams on 48 rivers according to the State Department of Water Resources. In 1975 California used 149 billion kilowatt-hours* of electricity, of which 33.2 billion were generated by hydroelectric turbines. These 68 new dams are hoped to produce 9.7 billion kilowatt-hours (kWh), or less than 7% of the 1975 total. 9,948 Megawatts (million watts) of instantaneous generating capacity exist in California today. 5,536 Megawatts (MW) more could be added if those 68 dams were built. This capacity, or "peaking power," is the maximum that can be used at any given time. Recent energy strategies include hydroelectric power primarily as a peaking energy source for times of year or times of day when energy use is highest. Roughly 1400 MW of peaking capacity could be added merely by upgrading the efficiency of existing turbines and by installing turbines on existing dams.

One way to analyze whether a dam is a good buy or a bad buy is by calculating what part of the time it would be operating at the potential it was designed for. This can easily be expressed as millions of kilowatt-hours generated per Megawatts of capacity, or "peak generating hours per year." Shasta Dam weighs in at 4.07 hours, Old Melones Dam at 4.88, the powerhouses on the Hetch-Hetchy at 7.72 hours. New Melones Dam, with its 430 million kWh per year and 300 MW capacity, is a featherweight 1.43 peak generating hours per year. This means that the power generation from New Melones, like many of the new dams, is only useful for peaking power. The primary purpose of New Melones was to have been flood control. Water supply for irrigation, reservoir recreation and hydroelectric generation were all afterthoughts. Yet the multi-purpose operation planned to justify a full New Melones Dam would preclude significant power generation during peak hours, even to the limited extent that is planned.

Roughly five million acre-feet of water is consumed for municipal and industrial purposes in California. A federally-funded study done at UC Berkeley Lawrence Labs estimates that 38% of residential and industrial water can be saved with simple, cost-effective changes. During the recent drought, Bay

Area water users voluntarily reduced their water use by 40%.

Using low flow shower heads and "flow restrictors" to cut water off while "soaping up" could save three times the energy and one-third more water than New Melones would produce. Overall, nine times the water and six times the energy that New Melones can produce would result from bringing water conservation in residential and industrial uses "on-line."

Since residential and industrial water is only 14% of the state total, and since energy use as a result of that water use amounts to only 4% of the state's energy use. This amount of savings, 2559 million kWh, over six times the yield of New Melones Dam, is truly remarkable.

peak-load management

The state Energy Commission estimates that 4000 Megawatts of peak power can be acquired by 1990 if the state's major utilities pool their peak-power generating capabilities. An additional 1400 Megawatts (million watts or MW) could be developed by improving efficiency of generators on existing dams in the course of regularly scheduled rewinding and by fitting generators on existing dams that do not have them. From these two sources alone enough peaking power could be developed to offset any losses if none of the 68 planned dams were ever built, for virtually no cost. In addition, the Energy Commission has a detailed plan to reduce peak loads by shifting power users away from peak hours. The plan would require swimming-pool filters to be operated during non-peak hours, survey commercial buildings to reduce waste, voluntarily schedule households to switch off on use of major appliances and more accurately present energy costs so decisions can be made to save money and energy as a result of rate-change proceedings. These measures should reduce peak demands by 5000 MW and energy use by 27 billion kWh. This added to the 5400 MW of peaking power described above is nearly double the peakload generating capacity that could be gained by building 68 dams, and at a small fraction of the cost.

* a kilowatt-hour is the energy required to light a thousand-watt light for an hour.



A Future Energy Scenario for California

The U.S. can have a healthy, expanding economy in the year 2000 while using only about 10-15% more energy than is used today, according to a report by the President's Council on Environmental Quality.

California can maintain a healthy, growing economy while relying entirely on renewable sources of energy already available within the state's own borders, according to a federally-funded study done by Lawrence Berkeley Labs. In 2025, California could run almost entirely on renewable energy resources, primarily solar energy, hydropower, wind and biomass conversion. By substituting hydro-

power retrofit on existing dams, upgrading existing hydropower facilities and powerpooling or peakload management described elsewhere on this page, this scenario can provide an energy future involving no new dams, no nuclear, oil, coal, or natural gas-fired plants. The Natural Resources Defense Council has proposed an interim scenario to bridge the gap between now and the renewable energy future outlined in the LBL paper. This scenario was outlined in a paper entitled "California Energy Policy: A Preliminary Discussion Paper," by Laura King, dated 11/15/78. These plans together constitute a preliminary soft energy plan for our future.

An Interview with General Dredge

General Dredge

We were privileged to have an exclusive interview recently with General Dredge, chief of environmental projects, Army Corps of Engineers. With the number of environmental projects now underway you can understand that General Dredge is a busy man, but he was able to respond to our inquiries concerning a current water resource project.

FOR — General Dredge, I understand you're going to flood the last wildlife refuge in this state for fish and wildlife purposes.

GD — Why, yes. The environment is a large part of our mission.

FOR — Some people have said that flooding the refuge might not be a good thing for the fish and wildlife that live there now.

GD — Ah, well, reasonable men can always differ on these things. That's what makes life interesting. What's really important here is that we can establish a dialogue, keep open our lines of communication.

FOR — What about the bald eagle and the ivory-billed woodpecker that have been seen there? Aren't they rare and endangered species?

GD — We realize that. But in our view, if they're rare then very few Americans get to enjoy them. Our projects are for all Americans to enjoy.

FOR — How will Americans enjoy this lake?

GD — Through industry. You see we estimate that twenty-four major industries will be able to discharge into the lake we provide. This provides water quality benefits.

FOR — But General Dredge, how do industrial discharges into the lake enhance water quality?

GD — You've got to see the big picture. You can imagine what these discharges would do to the wildlife refuge if it were still there.

FOR — Yes, I can. It sure makes sense when you put it that way. But what will happen when the lake gets full of industrial waste?

GD — We've thought of that, too. We'll simply open the gates and let it run downstream.

FOR — Won't the people downstream object?

GD — Of course not. It will flush away their dirty water, too. We've computed this as an additional water quality benefit.

FOR — But where will it all go, General Dredge?

GD — Out of harm's way, into the ocean.

FOR — Is there a problem with flushing all of our wastes into the oceans?

GD — You know who lives on the other side of those oceans, don't you? All those foreigners.

-Courtesy of National Wildlife Federation

FOR — Say, that's right. Are there any other water quality benefits to the project?

GD — Yes, sediment control. The dam will trap all of the mud and silt which would otherwise have floated downstream.

FOR — Some people have suggested that the dam might fill up with sediment. Is that true?

GD — Only to a limited extent. Our engineers feel that this will not happen for at least 5 to 10 years. During this time, the people will receive the flood control to which they are entitled.

FOR — But no one lives here now. Which people are you speaking of?

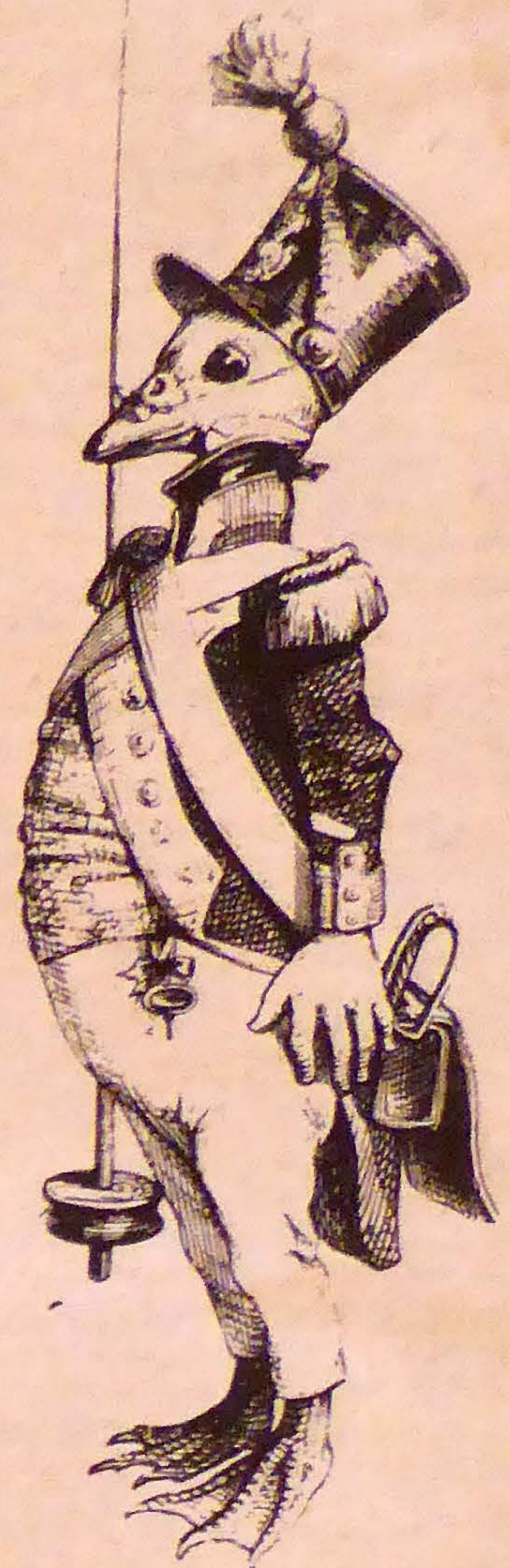
GD — The ones that are going to move in below the dam after we build it.

FOR — I see. But won't they want protection for more than ten years?

GD — Yes. And God knows they deserve it, too. They can ask us to build a new dam then. Between you and me, we've already got one under study. There's only one problem, though.

FOR — What's that, General Dredge?

GD — We don't seem to be able to find a river for it.



HEADWATERS

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HELP SAVE THE STANISLAUS

Dear Friend,

Friends of the River was born in the struggle to save the Stanislaus River. After a statewide ballot initiative in 1974 and a lobbying drive in 1976 both failed, we turned to public education and working with decision makers to allow for a living river. We hope to go to Congress to ask for permanent protection of the canyon this year.

The campaign to save the Stanislaus continues and is the rallying point of F.O.R. At the same time, F.O.R. has expanded its reach into the areas of technical research (Operations Study of New Melones Reservoir), legal action (contesting Middle Fork Feather River mining operations and proposed dams on N. Fork Stanislaus) and state and federal water policy (attending and testifying at hearings on the Peripheral Canal; State Water, Parks & Wildlife Committees; and the Governor's Water Rights Review Commission).

Looking to its own future and the role it hopes to play in future management of California water resources, F.O.R. incorporated as a non-profit corporation in May of 1978. F.O.R. now has an outstanding board of directors and by-laws, which include the general membership in a participatory capacity; an office in San Francisco to promote educational outreach, membership development and fundraising (in conjunction with the F.O.R. Foundation); and perhaps most importantly, three F.O.R. chapters — North Coast, Davis and Mother Lode South. F.O.R. looks forward to an ever-increasing membership, dedicated to the wise management of our resources, and to expanding its own resource base to carry the word to everyone — a home without wild places is no home at all.

Laurie McCann

- Membership in Friends of the River is \$15 per year (non tax-deductible). Larger memberships are gratefully accepted. Your membership supports and lets you take part in FOR's efforts to protect our last rivers and creeks. Members receive **Headwaters** bimonthly. \$5 makes you a member if you cannot afford more (\$).
- Tax-deductible contributions for educational purposes can be made out to "FOR Foundation — Save the Stanislaus Fund."
- "Send me FOR's 20 page document supporting protecting the Stanislaus above Parrott's Ferry." (\$1)

Name _____

Address _____

City _____

State _____

Zip _____

Phone _____

- ✓ 1200 Dams In California
- ✓ Only One Damless River (the Smith)
- ✓ ENOUGH!

Cottonwood Creek

Annual "flood control" benefits of an Army Corps project increased (on paper) 360% in two months. However, the main purpose of the two-dam proposal is for water delivery to "water-deficient areas of the state." Does that mean Cottonwood Creek water will go to Mono Lake?

Warm Springs

Site of a classic Army Corps boondoggle about to dig itself into a hole: Figured at an appropriate interest rate of 6-7/8%, this project would return 84¢ to the taxpayers' dollar.

American River - North/Middle Forks

Auburn Dam goes back to the drawing boards because of inability to withstand earthquakes. Cost estimates now approach \$2 billion.

American River - South Fork

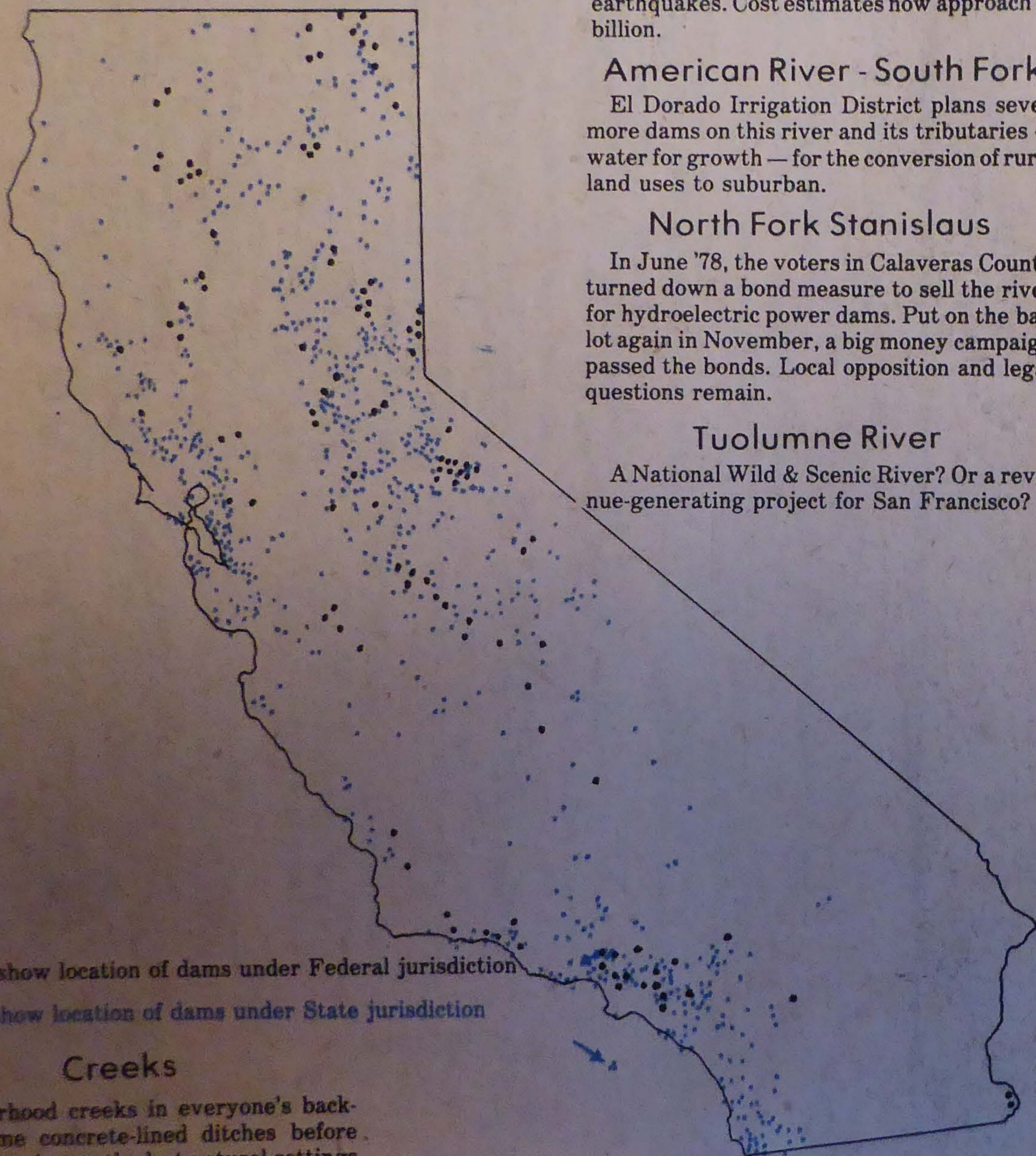
El Dorado Irrigation District plans seven more dams on this river and its tributaries — water for growth — for the conversion of rural land uses to suburban.

North Fork Stanislaus

In June '78, the voters in Calaveras County turned down a bond measure to sell the river for hydroelectric power dams. Put on the ballot again in November, a big money campaign passed the bonds. Local opposition and legal questions remain.

Tuolumne River

A National Wild & Scenic River? Or a revenue-generating project for San Francisco?



Black dots show location of dams under Federal jurisdiction
 Blue dots show location of dams under State jurisdiction

Creeks

Neighborhood creeks in everyone's backyard become concrete-lined ditches before our eyes. Creeks are the last natural settings available to the city dweller. In Santa Rosa, people are planting trees to help rehabilitate a creek which was straightened many years ago. We all know a place where this can happen. ...

WATERSHED QUIZ

- When you turn on your tap where does the water come from?
- When you flush your toilet where does the water go?
- If rain falls on your house where does it go?