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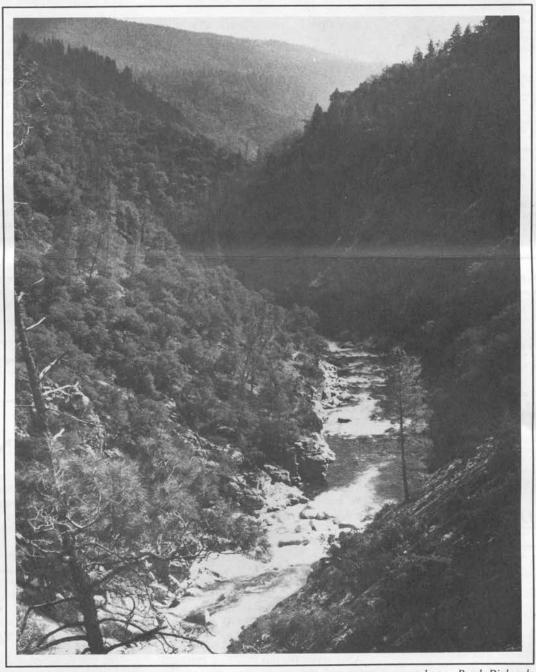


photo: Brad Richards

FEATHER RIVER

Friends of the River

is dedicated to the preservation of our rivers and creeks, and to the conservation of our water and energy supplies.

Annual membership dues are \$15.

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MIDDLE FORK OF THE FEATHER SAVED AGAIN

By Steve Evans

Conservationists have successfully defended the Middle Fork of the Feather against disruptive mining.

In April, Forest Service Chief Max Peterson upheld the appeal of several conservation groups and ordered a stop to a plan involving extensive gold mining within the "wild" zone of the Middle Fork, California's first river in the National Wild and Scenic River System.

The claims in question are located at Hanson Bar in Plumas National Forest. In 1977, the owner of the claims, Continental Quicksilver of Oracle, Arizona, was given approval by Plumas Forest for the dredging of 1¼ miles of river gravel along the Middle Fork. Conservationists declared their opposition to the project because of the impacts on the land, water quality, and fisheries of what was then the only federally protected river in the state.

The Federal Wild and Scenic Rivers Act does allow placer mining of valid claims existing at the passage of the law in 1968. Otherwise, mining is prohibited. In the case of the "Neptune Claims" at Hanson Bar, Plumas Forest administrators felt that their regulatory power was negligible because of the loophole in the Wild Rivers Act, as well as the pro-development orientation of mining law.

Consequently, Plumas Forest approved Continental's plan of operations in 1978. The Northstate Wilderness Committee, Friends of the River, and the Northern California Flyfishers for Conservation appealed to the Regional Forester in San Francisco. Continental was enjoined from dredging until the merits of the appeal could be decided by the Forest Service.

Three years and several interim decisions later (two denials from the Regional Forester, a remand from the Chief for more information, and an additional appeal filed by the conservation groups last year), Chief Peterson finally rejected Continental's plan.

In his decision, Peterson basically ignored the probable impact of the mining on the river. Instead, the Chief based his decision primarily on the questionable validity of the mining claims.

Since the announcement of Continental's plan, the conservation groups had maintained that the claims were not allowable under the Wild Rivers Act. They supported their arguments with a huge file of information gleaned from governmental records.

After reviewing this evidence, Peterson determined that more than one person owned the claims when they were sold to Continental in 1974, and that the current legal ownership of the claims was uncertain. He also found that one of the Neptune Claims was void because its value had not

been properly assessed.

Peterson stated, "While there is evidence that gold was found on the claims, the information available is insufficient to support a conclusion that valuable deposits of gold (in terms of quantity and quality) had been discovered prior to the ... withdrawal [of the river under the Wild Rivers Act]." He also determined that a claim is valid only when a prudent investment would prove to be profitable.

Peterson made his decision without prejudice against Continental Quicksilver, allowing them to submit additional information concerning the validity of the claim. Evidently, no new evidence could be found by Continental, as the Chief's decision was reviewed and approved by the Secretary of Agriculture without protest from the company.

The impact of the Chief's decision goes beyond the protection of one of California's most magnificent rivers. The decision affects all rivers within the Federal Wild and Scenic System, including the recently designated North Coast rivers, some suffering extensive placer mining.

Because of the successful appeal, conservationists have a potent new tool to halt particularly offensive mining. For more information, contact Friends of the River or the Northstate Wilderness Committee, 708 Cherry St., Chico 95926.

UPDATES

A Rose by Any Other Name

The Bureau of Reclamation is back. In November 1979, former Secretary of the Interior Andrus changed the historic name of this agency to the Water and Power Resources Service. Secretary Watt decided that was a mistake.

"The public we serve did not like [Andrus' change], nor did the employees who loyally worked for it. The name ... lacked a logical and convincing short form as a ready reference." (He should have checked with environmentalists, who created the abbreviation, W.A.P.R.S., pronounced "whoppers.")

In the press release announcing the restoration of the original name, Secretary Watt listed the annual accomplishments of the Bureau throughout the West: irrigating land on which \$7 billion of crops are harvested; supplying 18.9 million people

Continued on page 7

RIVERS

BRINGING LIFE TO THE LAND



Stanislaus River, 1980

"All of the rivers run into the sea, yet the sea is never full; unto the place from whence the rivers come thither they return again."

From the beginning, we have put rivers to work: as religious symbols, as the source of drinking supplies, and as highways for transportation.

California has a reputation as a land of milk and

honey. Rivers have helped shape this land, and give it life.

Yet no other natural resource has been so damaged. Most rivers are dangerously polluted, or so drawn down by consumption as to become trickles during the dry season. Sound management of rivers ranks among the most difficult environmental challenges of the 1980's.

Beginning in the high country, where rain and snowfall exceed the plants' need for moisture, rivers flow downhill, following the course of least resistance, carving canyons and valleys.

There are twenty-five large rivers in California and thousands of streams. These waterways carry a third of the rain and snowfall; the rest evaporates.

Formed during the winter in the mountains, the snowpack serves as a natural reservoir: as it melts from late spring through fall, rivers keep flowing.

The vegetation along waterways supports more wildlife than any other environment. Animals need a reliable source of water, and in the West, with a long dry season, there is no substitute for waterways. Eight out of ten species of birds nest near them.

Intil the Spanish immigration, Indians lived in elemental simplicity by rivers. Totalling a half-million people, the densest native settlement in North America, these Californian tribes gathered food from rivers and in the surrounding environment. The mortar holes where they ground acoms, their drawings on stone, and their arrowheads are mostly found near rivers. And some rivers are named in their languages, such as the Tuolumne, meaning "stone huts."

Introducing European management of rivers in the 1770's, the Mission San Diego and the Pueblo de los Angeles built dams to guarantee a supply of Water flows to the sea, as in the Bible—but also uphill, towards money.

water.

Rivers were damaged for the first time during the Gold Rush. In its heyday, miners could make a fortune just by panning. Later they used more destructive techniques: hundreds of small dams and five thousands miles of canals supplied water under pressure to forcefully wash the gold from gravel and soil.

Hydraulic mining prolonged the Gold Rush, but also brought about its end. This gouging of canyons created a constant flow of debris, flooding downstream farms. In 1884, in issuing a ban against hydraulic mining, a Federal Court concluded that certain uses of a river compete with others, and determined that farming was a "higher" use than mining.

Until 1900, California was a cattle and wheat kingdom. Since the farmers relied on rain, droughts eventually ruined these monopolies.

Irrigation was seen as the only way to make the desert bloom. The State Legislature authorized the formation of irrigation districts. 265 districts now supply over 15,000 farms.

Hydroelectricity accelerated urban settlement. In 1895, Oakland began to use electricity from a dam on the Yuba River. Since then, hydroelectric dams have been built at a rate of two a year.

Although most electricity is generated by private utilities, government has taken principal responsibility for managing rivers and supplying water since the Gold Rush. Starting after the Civil War, the Army Corps of Engineers has built dams and dredged channels to control floods and improve navigation. From 1900 through 1940, the cities of San Francisco and Los Angeles built watersupply systems on rivers located in distant mountains. The Federal Central Valley Project ranks as the largest water supplier in California (and, in fact, the whole West). The State Water Project is a close second.

In each instance, government subsidized damming, because private agencies could not pay the tremendous costs of accommodating population growth.

California's rivers and streams are regulated by several thousand dams.

A few principles underlie California's plumbing. Most of the rain falls where most people don't live. (Over three-quarters of the rain falls north of Sacramento, while three-quarters of its use is south of the capital.) Rain falls mostly during the winter, when people least need it. Finally, rainfall varies from year to year—from feast to famine. So dams are used to store water to correct natural patterns; water is then transported by pipes and canals, as needed. Water flows to the sea, as in the Bible—but also uphill, towards money.

The average Californian uses 1800 gallons of water in a day: 150 from the tap, and 1650 in the production of food and manufactured goods. That's the same as using 70 bathtubs of water each day.

Farming uses 85% of the state's water supply. Irrigation allows farmers to take advantage of the nearly perfect summers and rich soil. Typically, water is diverted from a canal, then pumped onto a field, flooding it through furrows. Few fields are irrigated through sprinklers or drip pipes, which allow precise application of water relative to the crop's needs.

California ranks first in the country in production of forty crops, such as grapes, peaches, carrots, lettuce and almonds. The principal crops are worth \$15 billion annually; processing and transporting them add an equal amount to the economy. Irrigation invests our rivers in food: 3000 pounds of water are used to grow 1 pound of cherries.

Hydraulic mining, Malakoff Diggins, Sierra foothills, by C.E. Watkins, 1871 Courtesy, Bancroft Library.



The rest of the state's water supply is used in homes, industries and offices. More water is used on lawns than in industries. Use in toilets and baths also exceeds industrial use, which is for processing food, for manufacturing, and for cooling.

Our water-supply system ranks among the great engineering accomplishments in history. Most of our drinking water is diverted from watersheds at least 150 miles away from the consumers. No construction on earth can be seen (with the naked eye) from a satellite, except the Great Wall of China and California's biggest aqueduct.

Rain or shine, food is in the supermarket. It is subsidized by taxes paid for dams. Charging a fraction of the cost of irrigation water from its dams, the Federal Government provides a subsidy exceeding \$500,000 for the typical farm. The consumer pays for food at the supermarket and through taxes.

Electricity is there, at the flick of a switch. And the state's rivers are put to work to provide 30% of that supply. Hydroelectric turbines can be turned on and off quickly to accommodate fluctuations in demand. The largest single use of electricity is pumping water a half-mile straight up a mountain range on its way to Southern California's cities.

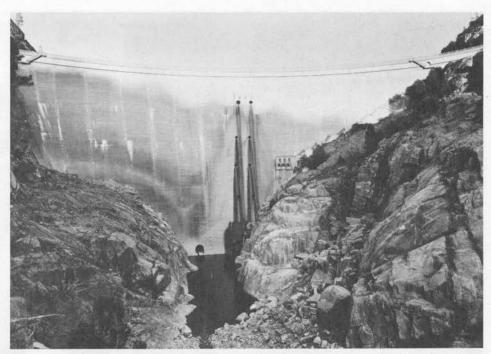
Dams provide security: water supply during a drought, electricity during an oil embargo. Yet they and other alterations of rivers, such as channelization, are taxes on the environment and economy.

Irrigation invests our rivers in food: 3000 pounds of water are used to grow 1 pound of cherries.

Dams systematically deplete rivers. Nearly 40% of their natural flow is diverted. Salty pollution which has drained off irrigated fields is the only flow in many riverbeds during the summer and fall. Some industries must use highly expensive filters to clean their water supply.

Because of diversions and pollution, the fisheries of the state are in pathetic shape. 10% of the native species are extinct; others, like the golden trout, are rare. Since 1940, the populations of bass, salmon and steelhead trout have declined by as much as 80%.

Dams damage fisheries more than their advocates expect or admit. For example, in proposing Trinity Dam, the Federal Government promised that the



O'Shaughnessy Dam, Tuolumne River, 1981. This dam supplies water to San Francisco, but in doing so, damages downstream trout fisheries.

downstream salmon and trout fisheries would "remain about the same"; yet since the dam's completion, these fisheries have been decimated. The Trinity County Supervisors have flatly concluded, "We were deceived."

Dams harm commercial and recreational fishing on rivers and streams. Commercial fishermen on inland waterways can no longer catch fifteen species of fish, such as the striped bass and white catfish. Fishermen claim "it isn't like it used to be"; this fish story is true. Fishing is now worth \$1 billion a year; with better management of rivers it could be worth much more.

Sightseeing, swimming and boating, the average Californian spends up to ten days a year on inland waterways. This is big business—\$2 billion a year. It would be a bigger business if our rivers were in better shape. The few stretches accessible or suitable for boating are jammed during the summer.

Fishing and river recreation are limited by the use of rivers for irrigation and industry. Too, our drinking water is threatened. In a recent survey, organisms in most of California's rivers contained elevated levels of toxic chemicals. In a national survey, 20% of the water-supply systems were found to violate the maximum safe level of contamination by various chemicals. Although no one knows how safe our drinking water is, it clearly is not safe enough.

Under Federal and State law, a few thousand miles of river in this state are now protected. The remaining 95% are fair game for further development, and the stretches in the Wild and Scenic River Systems could be removed. Preservation is legally inferior to development. With most rivers damaged, some to the point of biological unproductivity, how much more development can rivers bear?

The future of rivers can be like their past or different. Certainly the problems which rivers might be tapped to solve are greater now than in the past.

New population must be supplied with water. By the year 2000, California's population may exceed 29 million, up from its present 22 million.

The current overdraft of groundwater must be corrected. Already, more water is being pumped from wells, from the groundwater tables, than naturally seeps into them from rivers. Providing 40% of the water supply, these underground reservoirs are quickly receding; pumping will soon be uneconomical in many areas.

Finally, given the instability of the Middle East, our electricity supply must be made less dependent on oil, which now fuels 40% of all generation.

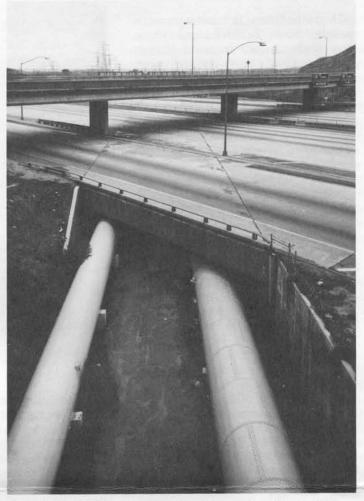
One solution: build more dams.

Private and governmental agencies have proposed several hundred dams and assorted facilities for California at a cost exceeding \$30 billion.

Engineering firms have even advanced more grandiose schemes for supplying California and the West, such as tapping the Columbia River in Oregon at a cost of \$11 billion, or



Stanislaus River and Canyon, 1980



Los Angeles Aqueduct System, delivering water from Owens Valley and Mono Lake, 1980.

Alaska's Yukon River at a cost of \$200 billion.

Further damming is too much of a good thing. The economical sites have already been chosen.

As part of a growing coalition of farmers and businessmen, Friends of the River Foundation proposes a better future: more efficient use of present supplies of energy and water, and environmentally sensitive production of new supplies, which we call conservation. Every drop of water or jolt of energy which is conserved is then available for new use. This future makes good sense.

It costs less to the consumer. For example, better scheduling of irrigation can save water at a cost of \$10 per acrefoot; new water costs \$100 to \$200 per acrefoot.

Further damming is too much of a good thing. The economical sites have already been chosen. It costs less to the taxpayer. Because conservation pays for itself promptly, the Federal Government doesn't need to subsidize such measures to the same extent as building dams. (The farmer receiving Federal water pays 5% of its cost; the consumer of electricity, 33%. The taxpayer pays the rest of both bills, which in California will exceed \$10 billion at the turn of the century.)

It generates more jobs. Most of the cost of dams is for materials; most of the cost of conservation is for labor.

It works. The Federal Irrigation Management Service has helped farmers cut their use of water by 15% just by scheduling irrigation when the soil and crop most need it; as a result, the crop yield is increased, because the soil is less water-logged or eroded. Industries in California today use the same amount of water that fewer used in 1958, because they now recycle water; as an added benefit, pollution is reduced. Today's homeowners use less energy than in 1970; more homes are insulated now, and heating and cooling waste has been cut. The California Power and Light Company is building large power plants to be fueled by grape skins and sawdust, not coal, gas, uranium or rivers.

Increased efficiency in producing and using water supplies would give us the opportunity to protect the last wild rivers, and even restore some damaged ones.

The West was settled by people with get-up-and-go. They made the desert bloom. We now face a new frontier: preserving our irreplaceable heritage of rivers, and at the same time, supplying new population and fueling economic growth.

Friends of the River Foundation conducts research and distributes educational materials about rivers. Call or write us for information.

Friends of the River Foundation Building C, Fort Mason Center San Francisco, California 94123 (415) 771-0401

This brochure was done through a collaboration of: Brian Fessenden, photography; Dick Roos-Collins, text; Jenny Shore, graphic design.

UPDATES

A Rose by Any Other Name...

Continued from page 2

with domestic water, and 14 million with electricity.

The press release did not mention the problems created by the Bureau: destruction of fisheries, canyons and architectural sites, and displacement of Eastern farming. (Some economists estimate that every acre served by the Bureau has driven 2 to 5 acres elsewhere out of production. The guaranteed supply of subsidized water, plus perfect weather, give the Western farmer a competitive edge.)

In any event, the good old days are back. Pull out your literature and buttons from 1979 and earlier; they're topical again.

The Stanislaus

On July 1, Secretary of the Interior Watt announced his "final decisions" on the operation of New Melones Dam. To no one's surprise, he approved storage of the maximum reservoir, totalling 2.4 million acre-feet, up from the current storage of .3 million acre-feet.

In addition, he identified the boundaries of the Stanislaus Basin, which has first right to the new water supply. This service area includes the geographic basin draining into the river, plus some adjacent farmland and towns. Any firm or short-term supply not needed in the basin would be sold to the Central San Joaquin Water District, the Stockton East Water District and the South Delta Water Agency. If any supply then remains, it would be made available to other Central Valley Project customers.

The technical part of Watt's decision is the most damaging to Friends of the River's continuing campaign and intent to preserve the upper Stanislaus Canyon. As an aide to Congressman Norm Shumway said, "Until the [basin determination] was made, water contracts could not be signed. The State and others have been arguing that you shouldn't fill the reservoir until there are water contracts proving the need for the water. Now that need can be proven."

Under Federal law, the planning requirements related to water supply have now been met. The Bureau could begin to negotiate sales: short-term contracts could be signed quickly, if the Bureau chooses, although long-term contracts might not be signed for years. The Bureau intends to sell agricultural water at \$3.50 an acre-foot (plus delivery charges), a fraction of the cost to the taxpayers.

Secretary Watt may think he has made his final decision on this subject, but he is mistaken. Several serious challenges remain. U.S. vs. California, concerning the right of the state to restrict filling, will be heard in Appelate Court in the fall. Moreover, the State will file for an injunction if the reservoir exceeds the level it has approved, elevation 844, just above Parrott's Ferry.

The history of this controversy has more twists than Chinese Dog Leg Rapid. Friends of the River is currently testing various strategies to turn Secretary Watt's decision around.

Write President Reagan (Washington, D.C. 20500) and encourage him to stand by his former position as governor: namely, that the Federal government should cooperate with the State in the management of New Melones Dam.

Another strategy now being tested: a statewide initiative which, if passed, would require the Federal government to limit New Melones Reservoir until contracts covering the full cost of the water are signed. F.O.R. has endorsed the effort by an independent committee to determine whether the initiative would be legal or successful.

By participating in a drawing to benefit the initiative, you might win a prize—including a trip for two down the Grand Canyon, or the Rio Bio Bio in Chile, or the Tatshenini in Alaska. Additional prizes (an Avon Professional raft, an Eclipse kayak) will be given to the people who sell the most tickets. For details, write the Stanislaus Initiative Committee, Box 161750, Suite 1, Sacramento 95816; or call (916) 457-0433.

Tuolumne

At a public meeting on July 14, Friends of the River urged the San Francisco Public Utilities Commission (PUC) to exercise restraint in the further development of the Tuolumne River.

An engineering study commissioned by the PUC recommends new construction in order to maximize electrical generation and double the current diversion of water. Some of the projects are minor: for example, rewinding the current generator, or adding an additional powerhouse, at Kirkwood. Some are major: raising O'Shaughnessy Dam by 50 to 160 feet (flooding more of Hetch Hetchy Valley), or adding a second Mountain Tunnel (diverting two-thirds of the flow around the rafting and fishing stretch).

The Tuolumne already provides the City with its electricity and water, and with surplus supplies which are sold at a profit exceeding \$14 million a year. (That profit will double or triple by 1985.)

Pat Carr, research specialist for F.O.R., told the PUC: "As far as we are concerned, the jury is still out on most of the recommended projects. The engineering study

explains how the projects would work. But the costs and benefits are not sufficiently analyzed: economic assumptions, particularly interest and inflation rates, may be skewed in favor of construction. And the impacts of the projects on the land and hydrology of the Tuolumne are ignored.

"Before it makes a commitment to any of these projects, the PUC shold complete its study by including these other factors. The stakes are high. Most of the affected stretches are under consideration by Congress as a Federal Wild and Scenic River. The PUC should determine how the City can increase its production of water and electricity with the very least damage to this river."

Until October 1982, no Federal agency (including the Federal Energy Regulatory Commission, which licenses all hydroelectric facilities) can consider or approve any plan which might affect the stretches under consideration for protection. If Congress has not acted by that deadline, then FERC could give a green light to additional development: either these new projects, or the Clavey and Wards Ferry Dams (on the drawing board for 15 years)—or parts of both plans.

Write to Mr. John Sanger, President of the PUC, at 287 City Hall, San Francisco 94102; urge him and the PUC to objectively assess the impact of the new projects on the land and hydrology of the Tuolumne.

South Fork of the American

"Heads, we win; tails, you flip again."
That's the motto of Assemblyman
Norm Waters, who is trying to defeat A.B.
1354.

This bill would prohibit planning or construction of dams on the South Fork between Salmon Falls and Chile Bar until 1989. On July 7, after the bill had passed the Assembly, Mr. Waters introduced various measures for reconsideration, one finally passing.

The Assembly will again vote on this moderate bill after August 10. Key votes: Gilbert Marguth (Alameda), Robert Naylor (South San Mateo), Michael Roos (Los Angeles), Don Sebastini (Sonoma), Dave Stirling (Los Angeles, Whittier). Particularly if you live in one of these districts, write your Assemblyman (State Capitol, Sacramento 95814).

The Mountain Democrat editorialized: "The out and out dam builders aren't going to be happy with a moratorium, just as the out and out conservationists aren't happy with any kind of water and power project on the South Fork. However, most people are somewhere in the middle and might find a moratorium not such a bad idea. As written, it doesn't slam the door on future development—if it becomes obvious that this will be necessary—but in the meantime, a moratorium would give everyone a cooling-off period."

REVIEWS OF OUR FIRST BOOK

A Guide to Three Rivers

Mark Twain:

"One of the better books I have read since **Huckleberry Finn**. If you aren't too busy watching frogs, sit a spell with it."

Mrs. Anna Cassidy (the author's mother):

"Possibly the best book in recent history."

Unknown rafter:

"This book is big trouble. Just recently I wrapped my raft as I watched the violet-green swallow hovering over the Indian paintbrush in front of the Calaveras-formation boulder with the Miwok mortar holes below the 1850's-style mining flume. If you want to know it all, and wrap a lot, this is the book for you."

Secretary of the Interior:

"I don't hike or raft outdoors, so I certainly would not read a book like this one. It's probably written by an extremist hired gun who owns a second home at Lake Tahoe."

Yes, I want my own copy of this celebrated book, which describes the history, geology and plant life of the Tuolumne, Stanislaus and American Rivers.

Rush my copy today. I have enclosed a check for \$10.50 (which includes tax, handling and fourth-class postage).

☐ Rush me ____ additional copies at \$9.50 each.

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