

IN SOME STATES, it is both possible and perfectly legal for the water in your favorite trout stream to be turned off as simply as water from a tap. In a situation — and there are many — where a variety of consumers are competing for a finite amount of water, anglers are apt to find themselves at the end of a very long list of priorities. There may be no water at the end of that list; there may be no fish.

In the arid West, the farmer is promised more water, and the industrialist cheap power. In the humid East, the farmer is promised better drainage, and the industrialist more and better waterways to move his products to market. Anglers are promised little, and usually get less.

In both parts of the country, the concept of flood control is advertised as a prime "benefit" to get approval for projects of doubtful merit or touted as a "bonus" for the power project already tucked in the creel of a pork-loving politician. The question of what may happen to the fish and other life-forms that the waterway has traditionally supported gets scant attention.

Most hydrological experts still view water from the angle of their particular engineering specialty. While technicians bicker over whether a river's prime purpose is to receive sewage, provide power, or carry freight, the biologist who suggests that a river's function is what it has always been — namely, to support life — is greeted with amazement or catcalls from people who feel a man is not a man unless he knows how to build a dam or run a turbine.

One might logically suppose that a river would be allowed to sustain life in a traditional manner no matter how its "surplus flows" were diverted. But in the snake-pit of competing demands for water — transport, power, irrigation, and more — a river's life-sustaining character is often ensured only by negotiation or by court battle — if it is ensured at all. There is, astonishingly, *no national policy* governing the minimum flow that must be left in an otherwise manipulated waterway.

Thus, in lieu of a national policy that places instream flow needs on a par with a stream's conversion to other uses, anglers and conservationists must continue fighting for fish-and-wildlife rights on a stream-by-stream, state-by-state basis. Fortunately, there are occasional successes.

ONE OF THE MOST DRAMATIC victories in this respect occurred last year when a group known as Catskill Waters, headed by Philip Neish and staffed largely by volunteer members from a number of major fly-fishing organizations, helped ram through the New York State legislature a bill protecting minimum water flows on the East and West branches of the Delaware River and on the Neversink.

The extent of this group's triumph can be measured by the fact that each one of these prime trout streams

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*You probably prefer your fly-fishing
unsullied by politics, but what will
you do when somebody
turns the water off, and you're left
with the simple equation —*

NO WATER, NO FISH

GEORGE REIGER

flows out of a New York City reservoir, and Catskill Waters first had to destroy two ancient and rather stubborn prejudices which held that reservoir waters were for city consumers only and that released water was wasted water.

In addition, and thanks largely to the understanding of the Delaware River Basin Commission and the support of the New York State Department of Environmental Conservation, Catskill Waters was able to persuade political leaders in neighboring and downstream Pennsylvania, New Jersey and Delaware that adequate water releases in New York would improve the overall quality of the Delaware River, to say nothing of its recreational opportunities. Thus, while only one state was involved in creating new regulations, the implications of the law are clearly regional in scope.

Long hours of stream sampling, data collation, and expert testimony paid dividends in making an end run on the New York Supreme Court's previous assumption that 12 million gallons of water a day were adequate for the instream flow needs of 182 miles of trout water. Patiently, the Catskill Waters volunteers explained to ill-informed, but influential, politicians that insufficient cold-water discharges from the Cannonsville, Pepacton, and Neversink reservoirs permitted downstream water temperatures to frequently exceed 80° Fahrenheit during summer hot spells, resulting in avoidable fish kills. The volunteers reminded the politicians that such kills not only degraded the rivers,



they infuriated streamside residents and fly fishermen of voting age.

Elected officials got the message, and Governor Hugh Carey signed a bill into law that provides, for example, 45 million gallons of water a day for the East Branch of the Delaware alone — sufficient cold water not only to insure good fly-fishing and natural reproduction of trout, but improved trout fishing all the way down and into the main stem of the Delaware.

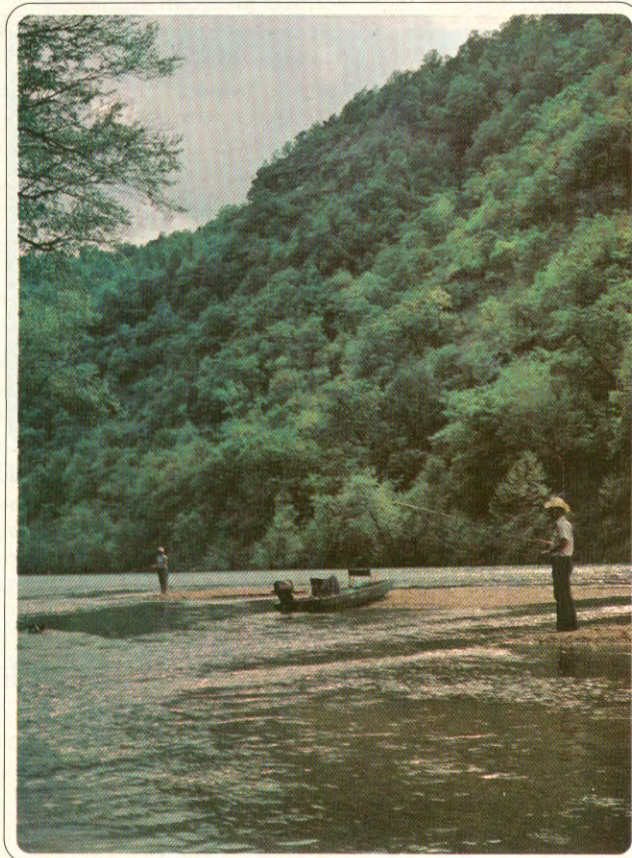
A most important feature of this two-year Catskill experiment is that it is taking place during one of the worst droughts in memory. Yet despite the larger water releases mandated by the new law, New Yorkers are getting ample drinking, bathing, and toilet-flushing water, and fly fishermen are catching ample trout.

In the previous instance, stream flows are controlled by an agency of New York City. More commonly, water projects are inspired, executed and subsequently managed by four federal agencies: the Army Corps of Engineers, the Bureau of Reclamation (BuRec), the Soil Conservation Service (SCS), and the Tennessee Valley Authority (TVA).

WHEN THEY WERE CREATED, the latter three bureaus were regarded as the cutting edge of conservation, and they attracted the best and the brightest environmental planners of the day. Presently, however, all four bureaus' rigid devotion to outmoded ideas and perpetual motion has badly tarnished the esteem in which they



Montana's Big Hole River is one of this country's most famous trout streams. There's apt to be plenty of water in June (upper photo) for both fish and fishermen. Demands for irrigation water increase as the river's flow drops later in the season, contributing to the late-season condition shown in the lower photo. These photographs were taken at different times of the year, and within a few miles of each other. Photos by Jonathan Wright (upper) and Gary LaFontaine.



The power projects of the early 1950's in the Missouri-Arkansas Ozarks drastically altered the ecology of most of the vast White River System. The dam shown above is on the North Fork of the White. Water is drawn from the cold depths of the man-made lake through the turbines at the base of the dam for power generation, creating a cold-water (trout) fishery with a flow that fluctuates dramatically as the generators are turned off and on. Rapidly changing water levels on the White lead some anglers into wearing floatation/fishing vests (above). The free-flowing Buffalo River, at left, is part of the same system, but remains a warm-water stream, host to large- and smallmouth bass, gar and other warm-water fish. FFM photos.

were once held, and the best and the brightest of today's generation are more often adversaries of these agencies than allies.

Depending on his age and where he lives, each angler has had his personal moment of truth with regard to the sometimes insidious nature of affable bureaucrats. For the young environmentalist in South Carolina or Georgia, the proposed \$254.9 million Richard B. Russell Dam seems like the end of the world. If he is a fly fisherman who prefers popping bugs for bass and bream in undeveloped surroundings to popping tabs off beer cans in a flotilla of pontoon boats it is the end of his world.

The Russell Dam will drown 29 miles of the Savannah River and 50 miles of tributaries in order to create recreational opportunities identical to those that exist in Hartwell and Clark Hill reservoirs up- and downstream from this last free-flowing stretch of the Savannah. Even more important to the angler who prefers running water to impoundments, it may eliminate much of the fish life below the proposed dam where turbines will send oxygen-depleted water.

The District Army Engineer, Colonel Francis J. Walter, promises to tap additional taxpayer funds to inject oxygen into the water discharged by the dam. However, older conservationists have heard such promises before and know how little they are worth once a dam is built and the man-in-charge moves on.

Furthermore, the solution to the increasing problem of oxygen poverty downstream from dams that draw their release water from the sterile depths of lakes is not so easily achieved as Colonel Walter implies. After all, one of his colleagues, Colonel Charles E. Edgar III, of the Little Rock (Arkansas) District, has rationalized six consecutive years of water-quality violations by Table Rock Dam—violations in large part due to the discharge of oxygen-poor water—by insisting that not only is the artificial injection of oxygen prohibitively expensive, it doesn't work!

If it's not possible to comply with existing water-quality standards, one solution that may be sought is to lower those standards, permitting the Corps to legitimately discharge water with a lower oxygen content from Table Rock Dam. This could jeopardize—by both physical fact and precedent—at least nine tailwater fisheries making up more than 120 miles of world-renowned trout habitat in the Missouri-Arkansas Ozarks.

WITH SUCH CHICANERY and stupidity found at these levels of government, it is sometimes difficult for conservationists to maintain hope and momentum. They do so, in part, by taking a historical perspective and seeing that if people are short-sighted today, they were, if anything, even more so in past decades.

While a few voices in the wilderness were raised to protest the conversion of mighty river systems like the Columbia and Missouri to chains of lakes, not until the advent of the Colorado River Storage Project Act in 1956 did several national environmental and sportsmen's groups band together to protest such irreversible spinoffs of dam-building as the displacement of com-

munities and cultures, the flooding of prime wildlife and recreation lands, the massive subsidization of a few favored industries, farmers, ranchers, and developers, and the disruption or homogenization of entire ecosystems.

While conservationists have lost most of the battles to preserve the native fauna and free-flowing waters of the Colorado, the effort has given them a sense of unity and purpose they had largely lost in the nearly half-century following their unsuccessful effort to prevent the flooding of the Hetch Hetchy Valley in Yosemite National Park.

Today, concerned citizens can turn to any one of a number of conservation-related groups for the kind of legal assistance and publicity that was only a dream a decade ago. For example, in addition to a broad spectrum of state and regional groups, the Richard B. Russell Dam on the Savannah River is opposed by the National Audubon Society, the National Wildlife Federation, the Izaak Walton League, Trout Unlimited, the Bass Anglers Sportsmen Society, the National Wild Turkey Federation, the Sierra Club, and the League of Women Voters.

Like strict parents, however, such national organizations can only render assistance to those people who insist that with or without help, they will fight the good fight. For those who whine and say they cannot hope to win without assistance, national groups must turn a deaf ear. They know their legal and consulting fees are a lot more limited than Uncle Sam's, and that if any conservation battles are to be won, they will be won largely with local skill and determination. Activists, not passivists, get nods of approval.

Recently, BuRec proposed another poorly planned water scheme for New Mexico that would have jeopardized one of the best trout waters in the state—the San Juan River where trophy rainbows of ten pounds are not uncommon. In its proposal to install hydro-electrical equipment at Navajo Dam, BuRec utterly disregarded the immensely valuable fisheries of this river, and a suit was brought by the National Wildlife Federation, spearheaded by efforts of its state affiliate, local members of Trout Unlimited, and officials of the New Mexico Department of Game and Fish, in order to bring BuRec to heel.

The court was shocked by the arrogance and ignorance of BuRec engineers, and this federal agency must now go back to Congress for the authorization it claimed it had in the first place, file a fish-and-wildlife mitigation report, and do a new environmental impact study—this time taking into account the fisheries it so conveniently overlooked the first time around.

WHILE COURT FIGHTS CAN BE DRAMATIC, a more effective and permanent way for conservationists to hammer home the truth that water has other values besides those associated with agriculture, industry, and human consumption is to sponsor laws requiring water-users to satisfy the instream flow needs of fish and wildlife before diverting so-called "surplus waters" elsewhere.

Federal laws protecting running water go back at least as far as the Organic Administration Act of 1897,

but not until passage of the Wild and Scenic Rivers Act in 1968 did conservationists have a tool enabling them to catalog and select for favored treatment entire river systems (or major portions thereof) in order to protect precisely those historical, cultural, and environmental values most often overlooked or condemned by the Corps, TVA, SCS or BuRec.

Unfortunately, the Wild and Scenic Rivers Act necessarily favors a relatively few well-known rivers and can do little to protect the remaining recreational values of streams already man-handled by reservoir and irrigation engineers. Other recent legislation like the National Environmental Policy Act of 1969 and the Federal Water Pollution Control Act of 1972 can help close the gap, but these laws are essentially defensive in nature with the burden of proof still on the biologist, and not the booster. In addition, these laws are under continual pressure from agricultural and industrial lobbyists who want them weakened.

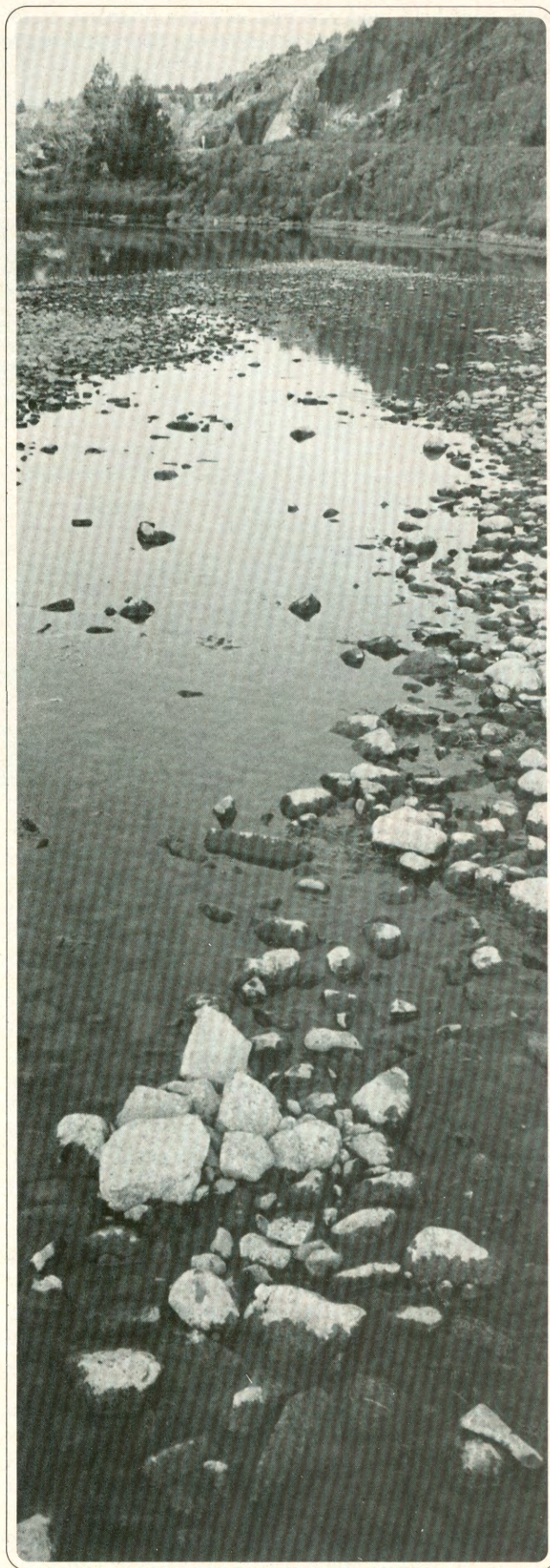
IN RESPONSE TO A RECENT INQUIRY by the National Wildlife Federation as to why the Bureau of Reclamation had cut the flow of water from Palisades Reservoir on the Snake River in eastern Idaho from 1,000 cubic-feet-per-second (cfs) to half that, Don Giampoli, acting commissioner for the Bureau, replied that, in case the Federation hadn't heard, there was a drought on.

In addition, the commissioner continued, "The state [of Idaho] has the responsibility for enforcing priorities of right to divert river flows. The water right for Palisades does not include use for maintaining flows for fish and wildlife purposes."

The Bureau of Reclamation remains indifferent to the immense value of the trout, steelhead, and salmon resources of the Pacific Northwest even as state courts are evolving new standards regarding the water needs of fish and wildlife. In April, 1975, the Sixth Judicial District Court of Idaho found that the U.S. Forest Service was entitled "to its claim of a non-consumptive use of the entire natural flow of three streams" from the point where the streams arise on a national forest to the point at which they leave federal jurisdiction. Furthermore, the court recognized fishing, camping, and other recreational and aesthetic uses of such water, as well as "protection and propagation of wildlife and preservation of fish cultures."

The National Wildlife Federation could sue the Bureau of Reclamation in the hope of bringing relief to the Snake River. Yet even if the Federation wins its case, weeks, perhaps months, will have passed, and the damage to the river's fisheries will already be complete.

There is always too much elapsed time between the initiation of an action damaging to fisheries, subsequent public notice, and injunctive relief, if any. Even when the director of a government agency or industry is sympathetic to the conservationist's point of view,



Low water on the Crooked River below Oregon's Prineville Lake, a reservoir used largely for irrigation. Photo by Don Gray.

local water managers frequently act first and get permission later—if at all.

Then, unless human lives or property are jeopardized or lost, executives in industry and government rarely think of firing a field man for incompetence or indifference resulting in a fish kill. More often, by the time the government agency or industry has spent many thousands of dollars justifying its action and defending itself from blame, the man or men responsible for the error get off without even a reprimand.

Attorney Patrick Parenteau of the National Wildlife Federation has observed that "until we go beyond the nice language of water-policy documents and put some teeth into a national water-policy review that gives equal time to fisheries, we will continue to rush around blocking a dam here and arranging water releases there. The question of minimum stream flows is increasingly a national problem and, in some cases, an international one. It must be dealt with through national laws.

"There have been many piecemeal purchases of fishing and water rights by individuals and conservation groups. It is about time the federal government contemplated acquiring similar rights to protect fish, wildlife and recreational values. We can argue cases endlessly, but they are nothing but five-finger exercises for lawyers and judges if the streams in question are in the process of being dammed, channelized, or paved with cement."

A FIRST STEP toward such a national water-policy review was made at Boise, Idaho, in May, 1976, in a four-day conference on instream flow needs sponsored by the Western Division of the American Fisheries Society, and the Power Division of the American Society of Civil Engineers. Unfortunately, the proceedings indicate that there was often less of a dialogue between traditional adversaries than a series of monologues by both.

Probably the best example of this non-meeting of the minds is to be found in the presentations of Ernest N. Sasaki of the U.S. Bureau of Reclamation and Felix E. Smith of the U.S. Fish and Wildlife Service. Both of their papers concerned the water resources development of the Trinity River in northern California, but except for the same place names, there were times the two men sounded as if they were talking about two different rivers a continent apart.

Ernest Sasaki described his bureau's construction of the Trinity and Lewiston dams, which took place from 1955 to 1964, as part of a plan to "divert surplus waters" from the Trinity River to California's Central Valley for agricultural purposes. While he acknowledged a subsequent decline in both the river's steelhead fisheries and streamside deer population, he added, "To date, the causes for the declines have not been determined."

In contrast, Felix Smith knew darned well what caused the declines in fish and wildlife, and he blamed his own service plus California's Department of Fish and Game for making inadequate recommendations for minimum instream flow before the project was begun. He added by way of warning to conservationists eyeing other projects still on the drawing boards that

"because of ironclad contracts and operating criteria, neither we nor the California Department of Fish and Game have been able to satisfactorily correct the instream flow situation."

This one miscalculation for this one river cost California and the nation the 20,460 acres of prime wildlife habitat that were flooded by the project. An estimated 8,500 to 10,000 black-tailed deer were lost. Also, some 59 miles of king salmon spawning and nursery habitat were eliminated along with 109 miles of steelhead spawning and nursery habitat.

Where formerly an average of 10,000 steelhead a year ascended the Trinity River past Lewiston, today the annual average is 223 fish with one recent low of 67 fish. These facts of post-dam construction make interesting reading alongside the 1952 pre-dam pronouncements of Arnold Zimmerman of the Bureau of Reclamation and Congressman Clare Engle that, under no circumstances, would there be any loss of fisheries.

Neither Engle nor Zimmerman occupy the posts of responsibility and trust they held during the Trinity River debate, and their successors insist they just inherited the project. Thus, terrible things are happening to America's streams, and nobody is responsible.

Furthermore, there is little hope for relief. As Felix Smith warned in his presentation, "Once distant clients have firmed up their demand and agri-business has invested its money, it is nearly impossible to void Bureau of Reclamation irrigation or power contracts and return the flows to the stream of origin."

Thus, despite a Trinity River Basin Fish and Wildlife Task Force that will spend about \$7.6 million in the next decade providing research and career opportunities for biologists and civil engineers alike, the raw truth is that the Trinity River is finished as a major steelhead and salmon producer, and neither all the king's horses nor all the king's men have the slightest possibility of putting the Trinity back together again. So much for the concept of "surplus" waters.

ALTHOUGH THE CARTER ADMINISTRATION initially offered hope that a review of 32 of the nation's worst water projects would lead to a generally better accounting of the activities and expenses of such federal agencies as the Bureau of Reclamation and the Corps of Engineers, the President's astonishing cave-in to pork-barrel interests in July has pretty well shattered conservationists' expectations of White House assistance in the struggle against dammers, channelizers, and others who dislike the sight and sound of untamed water.

Anglers may still solace themselves with a historical trend indicating progress, and continue to support the ideas expressed at the Instream Flow Needs Conference by environmental lawyer Scott W. Reed:

- Someday a fair price that considers all values of a stream will be assigned to any water sought for withdrawal; and
- Someday we will have laws providing for minimum flows in every river and stream in America.

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