

# Sierra Club Bulletin

A photograph of a winter stream flowing over rocks with snow on the banks and bare trees in the background. The water is turbulent, creating white foam as it cascades over the dark, wet rocks. The banks are covered in a layer of snow, and the surrounding trees are bare and brown, indicating a cold season. The overall scene is a natural, rugged landscape.

February 1974

Land and Water  
Energy and Man

"A valuable book, an enraging book. We can be grateful to Wolff for showing us how the selfishly cunning are succeeding in foreclosing our national mortgage."

*Arthur Cooper/Newsweek*

"A casebook of outrageous swindles....

He names names, exposes the hustlers, and traces the effects of their mischief on the nation's citizens and its landscape."

*Stewart L. Udall/from the introduction*

"Scenic areas from New York's Adirondack forests to the timeless deserts of the Southwest are being laid bare by the robber barons of the wilderness....Wolff documents the scandal."

*Robert Cassidy/The New Republic*

"The first authoritative book...on a neglected problem."

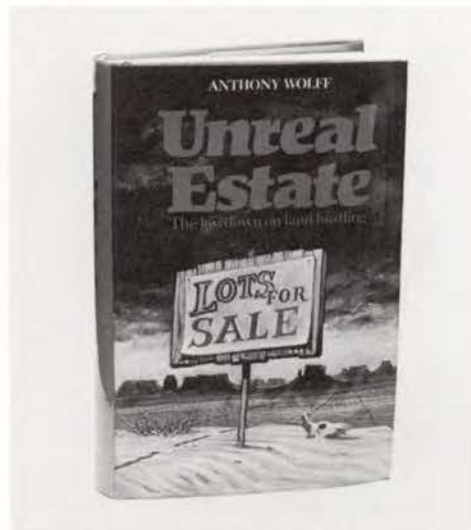
*Lynn Ludlow/San Francisco Examiner*

# Exposing the robber barons of the wilderness

Fast-talking, hard-selling subdividers are carving vast tracts of rural America into tiny lots. With millions of acres in their domain and billions of dollars in sales, these promoters are pulling off one of the biggest hustles in history. *Unreal Estate* takes this scandal apart piece by piece, exposing the sleight-of-tongue sales tactics, the padded prices, the desecration of deserts, seacoasts and landscapes in between. For anyone who loves the land—or who hopes to alert a friend already investing in questionable rural real estate—here is a handbook of essential information.



Anthony Wolff has been a senior editor of *Look* magazine and conservation editor of *American Heritage*. His articles have appeared in *Harper's*, *Audubon* and *Saturday Review/World*. Wolff was also project editor for the recent Sierra Club book, *The Sand Country of Aldo Leopold*.



*Unreal Estate*. A Sierra Club Book by Anthony Wolff. 304 pages. Cloth. Retail price: \$7.95. Member's price: \$6.95. Send your check or money order, payable to Sierra Club, to Sierra Club Books/7959 Rincon Annex, San Francisco, California 94120.

# Sierra Club Bulletin

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Cover: Winter thaw. . . . Pine Creek played a spring brook when Bruce Barnbaum set up his view camera and tripod in its icy waters. There are seasons within seasons, and even spring can be found in late December.

Founded in 1892, the Sierra Club works in the United States and other countries to restore the quality of the natural environment and to maintain the integrity of ecosystems. Educating the public to understand and support these objectives is a basic part of the club's program. All are invited to participate in its activities, which include programs to "...study, explore, and enjoy wildlands."

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# A Child Comes Unto Leviathan

GAIL MADONIA

**W**HALES have ranged widely in the world's oceans for at least 50 million years, but in the past 50 years whalers have pushed to the verge of extinction all but two species of great whales. The 1960's saw more whales killed (or "harvested," as whalers learned to say) than any other time since whaling began thousands of years ago. Half a million whales died in the sixties with the efficient help of spotter helicopters and explosive harpoons. The huge beasts were sliced and boiled down to provide pet food, transmission and rocket oil, and fertilizer for a product-hungry world.

In response to this extreme and ruthless slaughter, a movement has arisen to save the whales that remain. Conservationists are advocating a ten-year moratorium on whaling in the hope that severely reduced populations may be able to re-establish themselves in something approaching their

former numbers. In 1972, the save-the-whale movement received its first major support from the United Nations Conference on the Human Environment, which recommended the ten-year moratorium as a matter of environmental urgency. Since then, the moratorium push has moved favorably even into the meetings of the International Whaling Commission, traditionally a sanctuary for whalers rather than whales.

Among the most articulate and persuasive voices speaking out on behalf of the whale are those of children, whose poems and paintings reveal, as usual, an eloquence and directness rare in the world of adult discourse. The paintings and poems reproduced here were created by children working under the auspices of an organization called Friends of Whales. Tamar Griggs, who worked with the children who created these splendid productions, is now assembling them for

a book she is editing on children's whale art.

Children's energy on behalf of whales materialized as a palpable force in response to Farley Mowat's book, *A Whale for Killing*, which was condensed in the *Readers' Digest*. The condensation reached children in many countries, and scores of letters suddenly began appearing in the offices of Project Jonah, an organization whose work to save whales Mowat had praised in his book. Most of the children began by saying they had read Mowat's book and ended by asking what they could do to help save the whales. In response to this concern, Project Jonah established An International Children's Campaign to Save Whales.

The Children's Campaign combines education with environmental action. Children learn about whales and dolphins and then translate what they have learned into letters and paintings

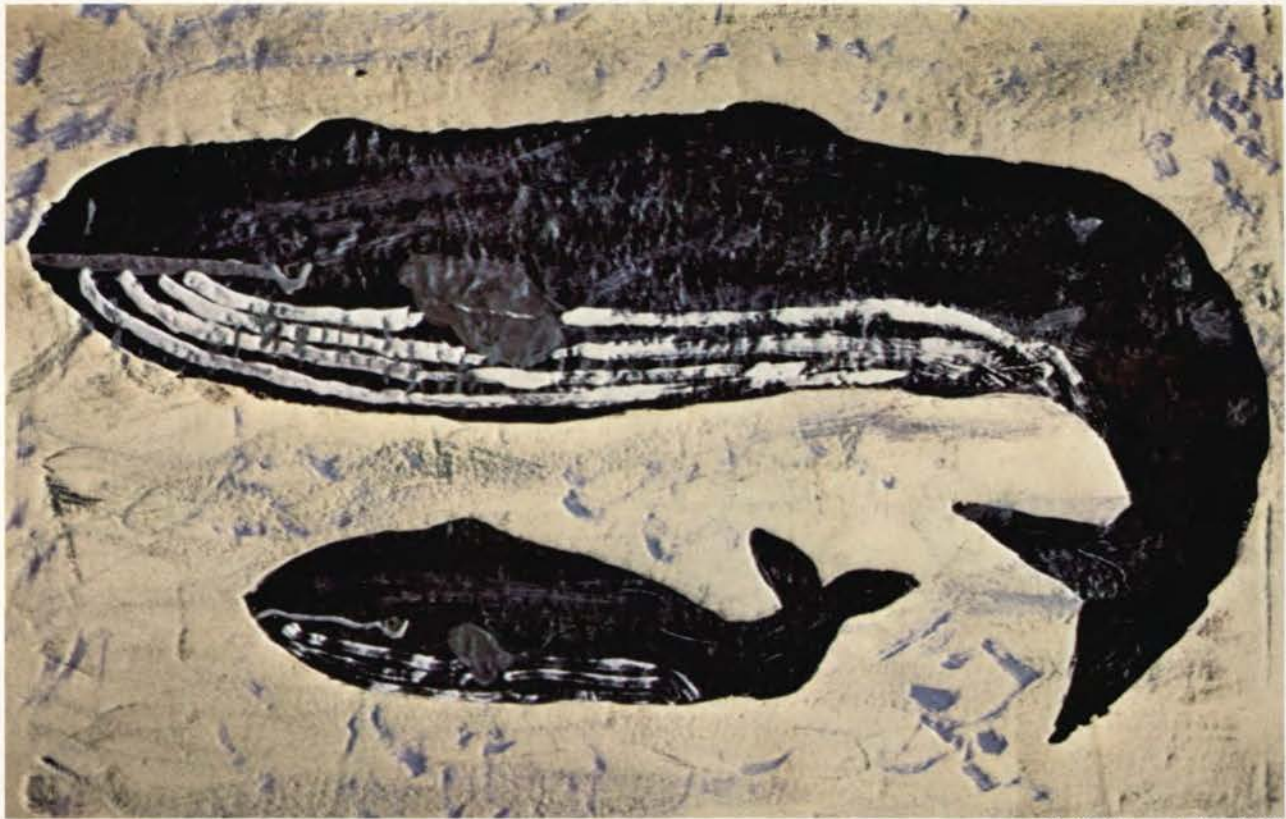


Jonathan Cooley

All the whales are swimming together and eating together and bumping heads together and having fun together with pleasure. Josh Abelson, Age Six

One day there were no whales. There were only people who were rich or poor. They were all happy. But one day the poor people wanted to rob the rich people. The God, named Poor, was mad. He changed them into whales. The whales were mad. They were so mad that sometimes they even screamed. The scientists picked up the sounds and they called it singing.

Jonny Cong, Age 11



Robin Bernardi, Age Eight

I have just taken birth out of dark hot mother. I know I have because I can feel the cool water below me. It is not a nice day because I can feel the drops of rain on my back. My tail was all cramped when I came out.

Luisa, Age Six

Whales live in trees. People think they live in the water. But they don't. Whales have lived in trees for over two million years. They build nests in the trees. Whales are only about four inches long and one inch high.

Cynthia Sue Vold, Age Nine

addressed to the leaders of Japan and Russia, the two principal whaling nations. This spring, these thousands of pleas will be carried to Tokyo, where a delegation of children will present them to Prime Minister Tanaka.

The Sierra Club was an early supporter of the Children's Campaign. At the January, 1973, meeting of the board of directors, the Club voted formal support and, later, restated its commitment in a mailing to local chapters urging members to encourage their children to participate. In addition, the Sierra Club Foundation gave financial support to help print a school kit on whales and dolphins. Geared toward elementary schools, the kit is available from: Jonah, Box 476, Bolinas, California 94924. Single copies are free; classroom sets of 25 cost \$3.00 per set. Other organiza-

tions supporting the children's campaign include the International Youth Federation, the National Education Association, and the World Federation for the Protection of Animals.

Changing things is exactly what children have in mind for the whale. One class of schoolchildren in San Francisco wrote an appeal for whales which they presented to the Japanese consulate on the opening day of the Antarctic whaling season. "Dear Consul-General Maeda," the letter began, "Would you tell your government that the children of America would like you to slow down on killing whales so that the children of the *world* can see the flourishing whale in its natural habitat." One young painter, even more direct, wrote on his work: "Don't kill whales. It is bad." "The men kill the whale," writes a young

girl, "They do not waste the great whale, except its beauty." "I am from Sweden," writes another child to Japanese Prime Minister Tanaka, "I hope you don't throw my letter away because I think this letter is important to the world."

"It became clear," said Tamar Griggs of her work with children, "that the study of whales expands into whole oceans of consequences. Children are deeply concerned with the fate of whales because they love whales and because they identify with the natural world. Children do love nature and are able to speak from an unusually frank vantage point, one with real power to change things. In all of the children's poems and paintings there is what Tamar Griggs calls "an exuberant vision of life." It is a compelling vision, and a direct one.



The People's Land  
The People's Water  
The People's Money  
The People's Lives

# RECLAMATION & EXPLOITATION

PAUL S. TAYLOR

EVER HEAR OF RECLAMATION law's 160-acre limitation on water deliveries to irrigators? Have you been told that this is "petty political tyranny," inefficient and uneconomic? That because of it the housewife pays more for food in the market? That it is an outmoded myth from bygone times? That it should be eliminated, as the Public Land Law Review Commission, under former Congressman Wayne Aspinall, recommended? (More recently, Senator Lee Metcalf of Montana called this body the "National Watered-Down Commission" because the Nixon Administration replaced members friendly to "the 160.")

Or have you heard that the 160 is a true conservation instrument, essential if properly used, for achieving a decent environment, even for preserving a decent rural society from self-destruction? Ever hear that in Imperial Valley, where the law goes unenforced, almost nine out of ten farm workers (87.3 percent) belong to the economic lower class, compared to, say, Iowa, just outside the reclamation belt, where the proportion is less than one in seven (13.6 percent)? Ever hear that the Sierra Club, joined by Friends of the Earth, National Wildlife Federation, and other civic and labor organizations, sees opportunity for using the 160 to check reclamation's current diseconomies, and through public planning to preserve open spaces and a decent physical and social environment?

Each generation defines "conservation" for itself. Today we are witnessing a great revival of public concern for conservation, and an expanding definition of its meaning. The word itself entered popular usage in the early 20th century, but action came earlier. Preservation of rare and scenic sites came first, notably Yellowstone Park. At that time, when men talked of water they spoke of "reclamation"—"irrigation" if too little, or "flood control" if too much. Only later was the word "conservation" used to cover alike preservation of sites and proper use of resources. Today, "environment" and "ecology" are added to "conservation," and Secretary of the Interior Rogers C. B. Morton reminds us that the meaning of environment "must include man himself." In so doing he opens doors and raises more questions than his department answers.

By whatever name you call it, national reclamation policy is a conservation perennial. It could not be otherwise. It seeks to govern the use and misuse of natural resources—millions of irrigated acres of land, more millions of acre-feet of water, and billions of public



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*Paul S. Taylor, Professor Emeritus of Economics at the University of California, Berkeley, is co-author (with photographer Dorothea Lange) of American Exodus: A Study in Human Erosion, which was originally published in 1943 and reissued in 1969 by Yale University Press.*

dollars to store the water and—at a right time and place—to move it to thirsty land. Who decides how much water is to be taken from where, and moved to where? Who pays? Who benefits?

The search for answers began in 1902, when Congress enacted the Reclamation Law. Particular attention was given to the last question: who benefits? Congressman Francis G. Newlands of Nevada explained as the bill was pending that President Theodore Roosevelt had invited members of the House Irrigation Committee of both parties to the White House for consultation. Personally familiar with the extent of large private landholdings in the West, Roosevelt, in Newland's words, ". . . was somewhat in doubt as to whether the bill was sufficiently guarded in the interest of homeseekers. . . . We all wanted to preserve that domain in small tracts for actual settlers. . . . We all wanted to prevent monopoly and concentration of ownership, and the result was that certain changes were made absolutely satisfactory both to the Executive and to the Irrigation Committee. . . ." With these changes, he said, the reclamation law would assure "above all, holding that vast [western] area for the unborn generations . . . in your States of the East . . . the Middle West, and . . . the South, to be held as a heritage for the entire people . . . dedicated forever to American home building, the true foundation of the Republic." These concluding words were greeted with "applause" and the bill became law, reciting that "No right to the use of water for land in private ownership shall be sold for a tract exceeding 160 acres to any one landowner, and no such sale shall be made to any landowner unless he be an actual bona fide resident on such land, or occupant thereof residing in the neighborhood. . . ."

Building on this foundation President Roosevelt in 1908 assembled the first Conference of Governors of the States. Natural resources was its subject, and its title was "Conference on Conservation." In the spirit of the Reclamation Act, the Declaration of the Governors states: "We declare our firm conviction that this conservation of our natural resources is a subject of transcendent importance, which should engage unremittingly the attention of the Nation, the States, and the People in earnest cooperation. We

agree that the sources of national wealth exist for the benefit of the People, and that monopoly thereof should not be tolerated."

However, neither a governors' declaration nor even a statutory enactment suffices to ensure adherence to principle and law. Only the other day, 71 years after passage of the Reclamation Act, with its prohibition of water monopoly, the *San Francisco Chronicle* appropriately headlined a story on the law with these words: "The Endless Water War of the 160." To anyone familiar with western history this need be no surprise. As long ago as 1877, the "war" was forecast by the *Visalia* (California) *Delta*, and the questions raised: Who pays? and, Who benefits? In words that serve as text for this phase of a century of western history the *Delta* reported: "No one would believe that shrewd, calculating business men would invest their money on the strength of land rising in value while unimproved, for even the farmer himself has to abandon it who endeavors to add to its value without water. At the same time, purchasers are not lacking who would add it to their already extensive dry domain and the people . . . will find themselves confronted by an array of force and talent to secure capital ownership of the water as well as of the land, and the people will at last have it to pay for. . . ."

The forecast came true. In 1947, a Bureau of Reclamation economist testified that the subsidy to water users along the Friant-Kern Canal in California's Central Valley was 75 percent or more of the cost of providing the water. In 1957, six California Congressmen estimated that the *unrepaid* federal subsidy to landowners for watering Central Valley Project lands amounted to \$577 an acre, or \$92,320 for 160 acres, exclusive of flood-control subsidy. On the entire project, irrigation was allocated 63 percent of cost, but irrigators were asked to repay only 17 percent. On western projects generally, recent estimates place the unrepaid subsidy to irrigators at from \$400 to \$2,000 an acre, varying from project to project. These subsidies tell who pays, and give half the answer to who benefits. Interior Secretary Harold Ickes rounded out the answer in 1945, corroborating the 1877 forecast of the *Visalia Delta*. The drive to avoid application of "the 160" designed to distribute reclamation

benefits among "the many" instead of among "the few," he explained, is simply "the age-old battle over who is to cash in on the unearned increment in land values created by a public investment."

That is how sympathetic administrators up to a generation ago de-

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**" . . . in Imperial Valley,  
almost nine out of ten  
farm workers belong to the  
economic lower class."**

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scribed the issue and pointed the direction in which solution lay. They did not say they wanted public planning of the environment in the reclamation belt, but clearly they were unwilling to leave the outcome to self-serving, large landholding interests. Yet no one has described more realistically how decisions have been made than William E. Warne, former Assistant Commissioner of Reclamation. In 1973 he wrote: "Since June 17, 1902, . . . projects have been undertaken where a sufficient number of representatives and senators desired them and when congressmen who wanted the work done were strategically placed on committees in which authorizations or appropriations were originating in order to get the necessary action." Aside from engineering considerations, that describes past land-use planning only too well.

Five years ago the Sierra Club took a fresh look at the problem and sought ways of doing something about it. To begin with, the law says that in order to receive water, the owners of "excess lands" above 160 acres must agree to sell the excess at the pre-water price, literally "without reference to the proposed construction of the irrigation works. . . ."

The Sierra Club, concerned to preserve the environment, has proposed taking full advantage of this opportunity. It proposed in 1968 the "federal purchase of excess lands . . . with the understanding that lands so purchased would be sold or leased under open space regulations."

The idea caught on. Congressman Robert W. Kastenmeier of Wisconsin introduced a Reclamation Lands Authority Bill to fulfill unrealized potentials of the historic 1902 statute that marked the dawn of the national conservation movement. Support



came quickly. Identical bills were introduced in the 92nd Congress by six California Congressmen: George Danielson, Ron Dellums, Don Edwards, John McFall, Edward Roybal, and Jerome Waldie. Four Senators did likewise: Birch Bayh, Alan Cranston, Fred Harris, and Philip Hart. The Interior Committees, then chaired by Congressman Wayne Aspinall and Senator Henry M. Jackson, have so far held no hearings on the bill.

Congressman Kastenmeier sees the public stake in his bill in the broadest terms inviting coalition support. Its purposes he described as three-fold: "One, to enact a long overdue, and long recommended, method for enforcing the public interest provisions of reclamation law; two, to finance public education by grants of revenues created from public water development, just as grants of 94 million acres of public lands financed public education at an earlier point in our history; and three, to enable the public itself, through a newly established authority, to plan the environment that public water development creates." The proposal has drawn support from other conservation, civic, and labor organizations, including the National Education Association, and awaits hearings.

The bill's potential for preserving rural open space has been estimated at 900,000 acres in California alone, provided "the 160" is fully enforced. It could curb the inroads being made on prime agricultural land by urban sprawl in critical areas, notably in California and Arizona, where the opportunity for conserving agricultural land is confronted by considerable resistance. Enforcement of "the 160" would also discourage large corporate farm combines from continuing to push for further water reclamation projects, which, for the most part, have proven uneconomical for everyone but them. Finally, by encouraging smaller farms, enforcement of "the 160" would give us a better chance to get away from our present dependence on pesticides and inorganic fertilizers, the use of which seems closely tied to large-farm economies.

In 1962, Senator Paul Douglas, of Illinois, threw light on the paralysis of reclamation policy that nominally, but not actually, governs water development in this country. Commenting on the circumvention of reclamation policy on the California Water Proj-

ect, he told the Congress: "I think we all know the practical difficulties in such a situation as this. The land is owned at present by a relatively small number of persons and corporations, each one of which owns an enormous amount of land. . . . They are organized, powerful . . . do not wish to have their holdings broken up . . . and . . . can marshal tremendous resources in support of their position and against anyone who tries to stand against them. . . . Those who might benefit from the acreage limitation . . . the small farmers who would come into being . . . if the huge holdings were broken up are persons in the future . . . they lack voices and in a sense are unrepresented."

Republican California Congressman Donald L. Jackson spelled out in 1949 what this means on the Salt River in Arizona, a project initiated a half-century ago and on the boards for expansion. "It is true that under reclamation law," he said, "each individual ownership is entitled to 160 acres of irrigated land. However, in the Salt River area alone, which contains more than two-thirds of the proposed Arizona project, there are 995 ownerships in excess of reclamation law. About 32 percent of the irrigable land in this one area is held in excess ownership."

"True, the Bureau of Reclamation says that the 160-acre law will be enforced. . . . But we know that this law has never been enforced there. There is no reason to believe it will be enforced in the future. Rather, there is every reason to believe that it will not be enforced. . . . If the . . . project should be authorized . . . the idle land now held by the big landowner will immediately increase in value six to ten times. If . . . the large landowner should be forced to sell all but 160 acres, he would, of course, sell at tremendous profit."

Opportunity for public environmental planning was likewise circumscribed by bureaucratic circumvention of the law in the Sacramento Valley. In 1964, the *Sacramento Union* reported "an historic compromise" after endless negotiations. The settlement allows excess land owners, by various devices, to "get the water without having to break up their farms. . . . Thus a battle which has been waged since 1944 when Shasta Dam was built, ended." The *Union* forecast this ricochet: "Similar contracts are

also being prepared for use in San Luis Project water." As part of the so-called compromise, the Bureau of Reclamation abandoned all attempts to collect repayment for 19 years' use of project water by the Sacramento diverters.

In 1933, a Secretary of the Interior ruled that the excess-land law does not apply to Imperial Valley, California, although the valley is saved from inundation and served in other ways by the Boulder Canyon Project. There, as noted earlier, nearly nine of ten "farm personnel" belong to the "lower class," and 4.4 percent belong to the "upper class." Half of the irrigated lands of the valley are owned in parcels larger than 160 acres. The secretary's executive assistant, a distinguished water attorney, recorded his opinion contrary to the secretary's ruling previous to its issuance, and subsequently testified before Congress that the law simply "has been ignored." Today the issue is before the Ninth Circuit Court of Appeals. It got

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**"We all wanted to preserve that domain for actual settlers. We all wanted to prevent monopoly. . . ."**

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there, not through the insistence of the Departments of Interior and Justice, but through the persistence of 123 landless Imperial Valley residents alerted and guided by a Brooklyn physician who had come to the valley to practice medicine.

One could go on and on. The devices destructive of public control over water and land monopoly are infinite, and thoroughly exploited. With their success and spread, opportunity for public planning of open space and the environment recedes.

Why is it so hard to obtain enforcement of the reclamation law at the hands of officials who administer it? Why is law observance relegated as a last resort to the courts, with the initiative and the costs of preserving what the law promised them left so largely to farm families and the landless? Can it be that bureaucrats perceive more clearly than others that "the 160" is indeed—as alleged—no more than "petty political tyranny," and inefficient and uneconomic besides? That it is a burden on con-

sumers? That it is an outmoded myth from long ago? And that wisely in the public interest they relax enforcement to a bare gesture? This is the burden of unending public-relations attacks upon national reclamation policy and law. Can it be true? The questions call for specific answer.

Is "the 160" really "petty political tyranny" imposed upon landowners of more than 160 acres? In 1958, the U.S. Supreme Court listened to argument calling the law formally "a taking of vested property rights both in land and . . . water," and charging that it "discriminate[s] between the non-excess and the excess landowner." The Court's immediate response was that "We cannot agree. . . . In short, the project is a subsidy, the cost of which will never be recovered in full." The 160-acre law, continued the Court, does not deprive owners of excess lands "of any rights to property or water." In other words, the claim of "petty political tyranny" seeks unsuccessfully to turn the truth bottom-side up.

Does "the 160" render agricultural production inefficient and uneconomical? On September 18, 1971, the *California Farmer* undertook to evaluate the charge that it does. In carefully chosen words it said: "What happens when irrigation water is introduced into the arid area? Does the 160-acre limitation help or hinder? What does farming become under imposed conditions? Southern Tulare County may not give a final answer, but it is old enough so there is a pattern of farming emerging. . . . Short-term financing has become almost routine. Methods to make agriculture profitable are working. Economies of big production are in evidence. Also, the economies of the small producer are there. Farm planning has been brought to engineering perfection. Production costs have been held if not actually reduced. . . . This has been done even in the face of the accusation that the limitation was throttling, rather than helping agriculture. The limitation rule actually appears to be solving long-term financing for many owners. . . . In this operation, efficiencies usually attributed to large acreages can be met and perhaps surpassed for an owner of less than 160 acres. . . . The barren land of southeast Tulare County is fast becoming a profitable garden with high-quality country living." Here it may be noted that the average

irrigated farm in California is 142 acres.

Is "the 160" a burden on consumers, who might fare better with products from much larger producing units? Comparing the market impact of larger with smaller farms, Philip M. Raup, Professor of Agricultural Economics at the University of Minnesota, testified in 1972: "The large farm appears to be efficient, cost-conscious, and the source of much of our efficiency in agricultural production. But . . . if there are only large farms, the potentials for collusion, market sharing, restrictions on entry of new firms, and outright supply control are enormously increased. It is a part of our mythology of large farms that they are efficient. But the key question is: efficient at what? For very large farms, the answer is clear: At the exercise of market power . . . the effects of concentration in agriculture are quite likely to drive up the relative price of food in the long run." And Raup pointed out that "What is now needed is a research effort that will alert communities to the potential environmental costs of large-scale agri-business firms."

With these diversionary allegations examined—tyranny, inefficiency, high production costs, and high market prices—we return to the fundamentals of conservation and wholesome environment. The admonition of the original Governors' Conference on Conservation not to tolerate resource monopoly is not out of date, although in practice it remains in jeopardy. The same is true of the 1902 statute's preference for public planning of water and land use over private speculation. The Supreme Court's reassurance that the meaning of the 160-acre limitation is that reclamation projects are "designed to benefit people, not land," has a very modern ring. The fate of this principle is uncertain, however, notwithstanding approval by the highest court. As remarked earlier, administrators relax enforcement under pressure.

A conspicuous example is the State Water Project of California. Faced with the prospect that Congress would refuse to exempt Federal Central Valley Project from acreage limitation, *Business Week* reported on March 13, 1944, that "If the big landowners in the valley lose out in this particular fight they have several other proposals to accomplish their end. One of them

. . . said to have originated among the big landowners of Fresno County, is for the State of California to take over the Central Valley project, paying the entire bill." Years elapsed, but finally the idea took hold.

In 1960 the voters of California, assured that the project "will pay for itself," approved a \$1.75-billion bond issue by a small margin. They were ill-informed that motivation for the state project was to escape acreage limitation; likewise that three of the State's senators and Governor Brown had publicly assured Congress, in Brown's words, that "the State of California will commit itself to invest more than \$11 billion . . . over and above the Federal program." Outlay on the state project already has reached \$2.8 billion, not including the huge interest payments this commits the state to make to retire construction costs. In water-receiving districts such as Metropolitan Water District in Southern California, property owners pay for project water whether they receive any or not, and the state's taxpayers, north and south, underwrite the entire bill.

Notwithstanding that Congress—besought to exempt the state project from acreage limitation while allowing joint use of reservoir, pumping, and canal facilities—had debated for six days and refused exemption, administrators signed a federal-state contract minus any provision for acreage limitation.

A decade has elapsed awaiting challenge of the administrators' omission of acreage-limitation law from the contract. It has been left to private citizens to undertake this. Now four Central Valley family farmers have brought suit in San Francisco Federal District Court. Two conservation organizations—the Sierra Club and the North Coast Rivers Association—have asked to intervene in the case on the side of the farmers seeking observance of the law. On August 2, 1973, the presiding judge granted their motion. This is a great step to assure full airing of the conservation and environmental essence of a law that too many, for too long, have assumed was little more than an economic technicality. The Sierra Club, with others, is moving into a key role in two branches of government, to represent the public interest in preservation of a decent environment, practically and effectively.

## The Tussock Moth Panic

# Old Poison Peddlers Never Die

**R**EMEMBER THE GYPSY MOTH? The tent caterpillar? The spruce budworm? To this alleged rogue's gallery add the Douglas-fir tussock moth, a resident of our western fir and Douglas-fir forests. As in the cases of the tussock moth's controversial cousins, the timber industry and certain elements in the Forest Service have adopted a simplistic strategy for control and have exaggerated the environmental hazards posed by the insect. In fact, like many of the West's villains, the tussock moth's reputation for destruction has been much overrated. Most of the time, the tussock moth is an inconspicuous and unobjectionable member of the forest community. The adult female moth lays her eggs among the Douglas-firs or true firs, and when the larvae hatch, they commence eating the needles of the host tree. Under normal conditions, the moth causes little or no noticeable defoliation of the host trees.

On occasion, however, and for reasons perhaps related to climatic variables, a local tussock moth population will increase markedly within a few months, causing considerable defoliation. While 25 to 30 percent of the infested trees may die over a period of three years, only a quarter of these deaths is caused solely by defoliation. The remainder more often succumb as well to bark beetles and other secondary invaders. Even so, when half or more of a tree is defoliated, it is probably doomed.

Tussock moth outbreaks typically last three years, though the majority of deaths result from defoliation incurred during the second year. By the end of the third year, the entire population typically collapses as a result of attack by natural enemies, in particular by a virus disease that affects only the tussock moth. Although defoliation continues during the third year, it is usually less serious than that of the second year. The viruses are the main factor in the decline of tussock moth epidemic populations, regardless of whether the infested area has been sprayed with pesticides or not. So far, the efficacy of DDT spraying programs has not yet been established, despite 25 years of experience. In fact, one study commissioned by the Forest Service said that "... limited comparisons in California of two chemically treated with two untreated areas showed no significant differences in total tree mortality." Yet notwithstanding such evidence,

the timber industry and the Forest Service in late 1973 applied to the EPA for permission to use the chemical in 1974 on 650,000 acres, mostly in the Blue Mountains of eastern Oregon and Washington. EPA hearings were still underway in Oregon and Washington at the time of this writing.

The Blue Mountain outbreak was first detected in 1972, one year after the initial onset of the infestation. As of November, 1973 (the third and, judging from past history, the last year of the outbreak), 690,000 acres showed some degree of visible defoliation, but on only about ten percent of this acreage was the damage severe. (A separate outbreak on 300,000 acres on the nearby Colville Indian Reservation is due to

collapse in 1974, the third year of the outbreak.) So far, dead host trees have been detected on only about 80,000 acres. A recent report prepared by S. G. Herman and others (The Evergreen State College, Olympia, Washington, November, 1973) cites figures showing that 99.5 percent of the Blue Mountain epidemic population censused in 1972 had died of natural causes (mostly the polyhedrosis virus) by the end of 1973.

Yet the timber industry and the Forest Service persist in their efforts to get EPA permission to spray almost the entire infested area with DDT. Their rationale defies understanding:

- They illogically projected potential 1974 damage from 1973 damage figures,



ignoring evidence that very few moths will be around in 1974 to eat the Blue Mountain trees.

- They claimed the infestation was spreading, citing a 1972 survey that grossly underestimated the area of initial outbreak. There is no evidence that tussock moths spread either like cholera or wildfire.

- They claimed that the moth has killed a high percentage of trees in the Blue Mountains, which depends on what you regard as "high." But even if you were to accept their characterization, spraying with DDT either now or last year would not significantly alter the mortality rate. Most trees were killed in 1972, when the industry and the Forest Service did not request treatment of any kind. Furthermore, most of the dead trees have already been salvage-harvested, and the moth-inspired clear cuts that remain are, if anything, less damaging or extensive than those the timber industry often cuts of its own accord.

- They have denied that alternative forms of control (which are not needed in any case at this point) are as effective as DDT in controlling the tussock moth. This is not true: *Bacillus thuringiensis*, an available biological control, has proven effective against the tussock moth. Although there remain

difficulties in application, it is certainly more "operational" than DDT, which has not only been proven deleterious, but has been essentially banned. The Forest Service phased out DDT in the late '60's with great fanfare. Why do they want to resurrect it now?

- They remain wedded to DDT despite its clearly detrimental effect on the environment (which they deny) and its apparent ineffectiveness in controlling tussock moth outbreaks (which they ignore). Among the possible alternatives, they have chosen the least effective, least desirable, and least justifiable.

Why they should have done so remains unclear, but it seems likely that both the timber industry and the Forest Service are using the tussock moth as an excuse to break EPA's grip on the use of DDT. (Since 1972, the use of DDT has been banned except under emergency conditions—as defined by the EPA.) In any case, the overwhelming fact remains that in asking the EPA for permission to use DDT against the tussock moth in 1974, the timber industry and the Forest Service have proposed, in effect, to declare war on an already retreating and moribund enemy.

*Stephen Whitney*

## Western Book Warehouse Fire

On October 28, 1973, fire gutted the warehouse of Western Book Service, the Club's shipping agent in San Francisco, destroying nearly 50,000 Sierra Club books and calendars. By contacting members whose checks had been deposited, the employees of Western Book Service and the Sierra Club staff in San Francisco were able to reconstruct almost all of the orders which were burned in the fire. There were a few orders, however, which we have not been able to revive because the microfilm of the checks was in some cases illegible and in some cases altogether blank.

The bulk of the orders we received by the end of November were shipped by December 10th; later orders were shipped within 2 weeks of receipt. If you did not receive your books or calendars, please contact us: Sierra Club Member Services, 220 Bush, San Francisco, California 94104.



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## 1974 Annual Banquet

OREGON GOVERNOR Tom McCall will be the guest speaker at the Sierra Club's 1974 Annual Banquet on Saturday evening, May 4, at McConnell Center on the campus of the Claremont Colleges, Claremont, California.

The banquet is the highlight of the Club's annual organizational meeting, which is being hosted this year on the weekend of May 3-5 by the Angeles Chapter. Awards and introductions of new officers and members of the Board of Directors will be made at that time. A no-host cocktail hour, starting at 6:00, precedes the 7:30 dinner.

Reservations for banquet tickets, at \$7.50 per person, should be sent to Annual Banquet Tickets, Angeles Chapter—Sierra Club, 2410 Beverly Boulevard, Los Angeles, California 90057. Requests for tickets should be received by April 26, and should be accompanied by a check and a stamped, self-addressed envelope.

Claremont is 35 miles east of Los Angeles and about 15 minutes from Ontario International Airport. For more details, including information on transportation arrangements from the airport and the city, write to Ted Trzyna, banquet chairman, P.O. Box 30, Claremont, California 91711.

## WASHINGTON REPORT

Brock Evans

**Congress Greet the Energy Crisis**

**Y**OU PEOPLE had better fold up your tents and go home—they're really giving you hell over in the Interior Committee today," said a newspaper man who called me up in early December. I answered that if we had quit every time it got tough, we never would have got started. Furthermore, the reporter, like many other observers in Washington, seems to have been quite mistaken. It now seems likely that environmentalists will come through the present "energy crisis" with the laws, values, and institutions we have worked so hard to create pretty much intact.

The crisis fever reached a peak of intensity in November, shortly after announcement of the Arab oil embargo and with the onset of cold weather. Congress responded to the public outcry to "do something" with the Emergency Energy Act, and made frantic efforts to get it passed before the Christmas recess. In the Senate, the Interior Committee met in near round-the-clock sessions, in which Sierra Club President Larry Moss, staff from this office, and many others participated. In Senator Muskie's Public Works Subcommittee, however, deliberations on the proposed variances to the Clean Air Act were conducted behind closed doors. The result was a mixed bag of legislation that confused the imagined urgency of the present situation with the need for enacting long-term measures of a wholly different character. It was not a good performance, but given the mood on the Hill, it could have been a lot worse.

It was a much worse story in the House, where hearings in the Interstate and Foreign Commerce Committee were confused and chaotic. Hardly anyone knew what was going on. When the bill came to the floor of the House for a final vote, it was even worse—a blatant charade, a parody of representative government in action. Every special interest used the occasion to get concessions for themselves, including amendments that would forbid busing, permit windfall profits for coal companies, and grant far-reaching exemptions from environmental protection laws. Virtually everything was shouted through by voice vote. It was a shocking performance.

When the Senate and House conferees finally sat down together some of the worst features of the House legislation were stricken, and in the final frantic hours just before the recess, agreement was reached. But then, oil state senators filibustered in the Senate to prevent adoption of the conference bill unless the provision for excess profits taxes was stricken. At the last moment, the

Senate capitulated to them and struck that provision. But the House balked and would not pass their version. And so Congress adjourned without any bill becoming law.

Too many of the public feel that somehow environmentalists have been "defeated," and that the movement is somehow dying. Nothing could be further from the truth. Consider, for example, that in late October, when the oil crunch had already become obvious and everybody knew that we were going to have to rely much more on coal, the Senate nevertheless passed a strip-mining bill far tougher than even environmentalists had anticipated. And even as deliberations were underway on the Emergency Energy Act, the House Interior Subcommittee passed out its version of an even tougher bill to regulate strip mining. Furthermore, many of the programs we have long advocated now are becoming law or practice, many as a result of the energy shortage. Freeway

construction has all but stopped. There is a distinct shift toward smaller cars, and a vastly increased emphasis on rail rapid transit. Almost daily, the government announces a new energy conservation program, and we are all much more conscious of the need to waste less. Finally, we are seeing at least the beginning of a major effort to develop clean sources of energy, such as solar power.

After a year and a half of intensive advertising blaming environmentalists for the "energy crisis" and promoting the oil industry "solutions," the public still isn't buying. As of late December, congressional mail, while very heavy on the energy situation, mostly blamed the present Administration and the oil industry for it—not environmentalists. And during the first week of January, the Federal Trade Commission announced it was investigating the oil industry's advertising campaign for possible misrepresentations and violations of law. We are not out of the woods yet, but we are certainly going to survive. Most likely, Congress will yet pass some form of emergency energy legislation; and special interests will still be there, trying to undermine our environmental control laws. We will be there too.

**CAPITOL NEWS****House reorganization proposal: the environmental impact**

**T**HE YEAR-OLD House Select Committee on Committees released a "working draft report" drastically revising existing House committee jurisdictions over environmental legislation. The report is expected to serve as the vehicle for consideration of major changes early in this session of Congress—perhaps as early as March.

Environmentalists expressed concern over report recommendations that an Agriculture and Natural Resources Committee be established with jurisdiction over public lands, forestry, national parks and wilderness, fish and wildlife.

These legislative areas with the exception of general agricultural matters are now controlled by the Interior and Merchant Marine and Fisheries Committees.

Under the draft plan, the Merchant Marine Committee would be abolished. Interior would be converted to the Energy and Environment Committee—without jurisdiction over forest, wilderness, national parks and recreation areas, and Indian affairs.

The new Energy Committee would act on environmental policy, clean air, clean water, coastal zones, noise, ocean dumping, radiation, solid waste, water and power resources,

energy conservation and regulation, Naval petroleum and oil shale.

The proposed reshuffling would turn matters of prime environmental concern over to members of the Agriculture Committee, frequently hostile to conservationists. The committee spawned the ill-fated National Timber Supply Act and has recently been trying to revive the use of DDT.

**Forest Service bows to Japan and to industry**

Observing that the timber industry is "never satisfied," Alaska Regional Forester Charles Yates announced a whopping 24 percent increase in the annual cut allowed for Alaska's Tongass and Chugach National Forests.

This figure much exceeds President Nixon's order to the Forest Service to step up the yearly cut by ten percent.

The announcement followed enormous pressure from the industry, which wants more wood to take advantage of unprecedented profit opportunity in Japan, where demand for timber is at an all-time high,

## EDITORIAL

Michael McCloskey

**Who Is to Blame**

THOSE WHO HAVE BEEN OPPOSING the environmental movement all along are trying to turn the latest energy shortages to their advantage. If they can only convince the public that environmentalists are to blame, they may be able to scrap environmental laws. The latest Gallup poll, though, shows that this strategy is backfiring. Most people blame either industry (31 percent) or the government (42 percent); only two percent blame environmentalists.

The public knows who made the key mistakes, and it was not the environmentalists. They know the basic mistakes are rooted in decisions made by American industry and government agencies allied with it.

Who, for instance, has been pushing sales of large cars that use so much gas? It wasn't environmentalists. Who has been pushing all the extras on those cars that consume even more gasoline? And who keeps changing car models to waste resources? Who pushed all the freeways around urban areas to trigger so much sprawl that traps so many of us in unreasonably long, gas-consuming commutes? And who told us for so long that Reddy Kilowatt was there with boundless power to cater to our every whim? It wasn't environmentalists who were trying to get everybody insatiably hooked on wasting energy.

Who got all the depletion allowances and tax subsidies to produce more oil, yet didn't come through? Who diverted the profits from these subsidies into promoting foreign oil markets, thereby boosting consumption even more? And who built all the refineries in the Caribbean and elsewhere abroad for that market, while protesting it couldn't find refinery sites here? And who, also, talked the American government into imposing quotas for so long on importing foreign oil, so that we could drain America first? And which industry has been sitting on privately owned oil-shale leases for years? And which industry has bought its way into control of the American coal mining industry and has been phasing out production from underground mines, where most of the coal is (97 percent can *only* be deep-mined)? Nobody can say it is the environmentalists.

Who kept trying to push ahead with careless technology, poor planning, and indifference to environmental factors? Who was about to build a trans-Alaska pipeline that would have come apart in permafrost? Who mishandled their well casing in the Santa Barbara channel to cause a blowout? Who neglected their stormchokes in the Gulf of Mexico oil well disasters? Who got fined? Who caused the tanker collision spills in San Francisco Bay? Who said it wasn't worthwhile to take the sulfur out of stack gasses, and then that it couldn't be done, while Japanese plants were doing it all along? Who tried to bury nuclear plant wastes in Kansas salt formations that weren't safe and dry the way they were supposed to be? Who keeps trying to put nuclear plants on earthquake faults? Who caused fuel rod failures? It wasn't environmentalists.

The fact that environmentalists have called attention to these problems does not mean they caused them. In fact, the crisis would be less severe if they had been heeded. Those who attempt to convict environmentalists may find themselves in the dock.

according to Sierra Club Alaska Representative Jack Hession.

Yates said only the Sierra Club's suit contesting the 8.75 billion board foot sale to Champion International prevents the Forest Service from reaching the annual allowable cut of 887 million board feet in Alaska.

Club forestry consultant Gordon Robinson reports that, as elsewhere in the national forest system, the Forest Service's Alaska region has overestimated the amount of commercially accessible timber.

Whether the Alaska region cuts an additional 24 percent next year—most of which would be exported to Japan in the form of pulp and cants—depends on the club's suit contesting the President's executive order,

issued in the absence of an environmental impact statement.

**Scientists plead for oceans**

"To destroy the ocean is to kill our planet," said Thor Heyerdahl, one of a panel of eminent scientists at a Sierra Club/World Federalist Educational Fund press conference in New York. The panel warned all governments that unrestricted exploitation of marine resources could permanently damage the world's oceans.

Citing the fragile ecology of the oceans and the fact that so little is known about them, the scientists were unanimous in urging that there be international standards

for all offshore activities regardless of the extent of national jurisdiction to be decided upon in the upcoming international Law of the Seas conference.

"What is startling and disturbing, considering the meagerness of information," said Dr. Howard Sanders, senior scientist at the Woods Hole Oceanographic Institute, "is the strongly implied conclusion that has been fostered so successfully by the oil industry that oil spills pose little serious threat to marine life."

Before these statements are accepted, he said, there must be "a significant body of evidence" to prove it. "But this body of evidence does not even remotely exist."

**Interior's Alaska plan sent to Congress**

Interior Secretary Rogers Morton sent Congress recommendations for adding 83.47 million acres to Alaska's national park, wildlife refuge, national forest, and wild and scenic rivers systems.

Sierra Club Executive Director Michael McCloskey said Morton's proposals "fulfilled the acreage levels that Congress ordered studied" for setting aside in the four systems, but "fell far short of boundaries necessary to protect fragile arctic ecosystems and unique scenic resources in Alaska."

Acting under authority provided by the Alaska Native Claims Act, Morton proposed additions to Mt. McKinley and Katmai National Parks and the creation of nine new park areas totaling 32.26 million acres, nine refuge additions totaling 31.59 million acres, four additions totaling 820,000 acres to the wild rivers system, and three new national forest areas (plus an addition to a fourth) totaling 18.8 million acres.

McCloskey said the club would ask Congress to expand the areas under consideration to about 106 million acres. Additions proposed for the Wrangells and Gates of the Arctic areas are "about half of that needed for protection," he said. Morton proposed that 5.5 million acres of the Wrangells be placed in national forest status, thus leaving its copper and mineral deposits open to future mining.

Congress has five years to act on the proposals.

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## NEWS VIEW

## Club Board adopts new policies: nuclear power, oil shale, energy

THE SIERRA CLUB BOARD OF DIRECTORS, meeting in San Francisco January 12 and 13, added to the club's energy-policy resolutions on nuclear power, offshore petroleum extraction, oil shale development, and energy research and development.

The nuclear power policy adopted by the board said the Sierra Club "opposes the licensing, construction and operation of new nuclear reactors utilizing the fission process, pending:

(a) "development of adequate national and global policies to curb energy over-use and unnecessary economic growth;

(b) "resolution of the significant safety problems inherent in reactor operation, disposal of spent fuels, and possible diversion of nuclear materials capable of use in weapons manufacture; and

(c) "the establishment of adequate regulatory machinery to guarantee adherence to the foregoing conditions."

By consensus it was agreed that the resolution does not apply to research reactors.

The directors resolved that no offshore petroleum exploration should occur until a large number of conditions are met. Among the conditions:

- Adequate mechanisms must be implemented to control the impacts of onshore-support facilities and associated secondary development (specifically a strengthened Coastal Zone Management Act, with immediate full funding and implementation of the federal coastal zone management system).

- Baseline biological, geological, and environmental data needed to evaluate the future impacts of petroleum development in a prospective area must be gathered;

- There must be adequate funding for studies of effects of large oil spills and the cumulative effect of oil pollution on the marine environment.

- Adequate available containment and oil recovery systems must exist in any area subject to oil spills.

Lease sales, the directors said, should be prohibited in areas of high seismic activity, fragile or unstable geological structures, or close to particularly diverse or productive marine ecosystems, or where offshore structures would reduce esthetic values, or where busy shipping traffic or other oilspill containment problems or other factors make the risks unusually high.

The directors said, "There should be no more than a gradual exploitation of offshore oil" so the public is able to assess the potential social and environmental costs of petroleum development versus the total

value to be gained.

Petroleum exploration and production that does take place, the directors said, must be controlled as strictly as possible by such means as:

- Rules to ensure use of the most advanced equipment and technology in all phases of exploration, development, and production;

- Specific stipulations prohibiting ocean dumping of any untreated sewage, oily wastes, drilling chemicals, contaminated formation fluids, and any non-inert drilling or production by-products;

- Failure-mode analysis and systems analysis techniques to assure adequate margins of environmental safety;

- Strict regulations eliminating all natural gas flaring, with the exception of minimal safety flares.

The directors said petroleum exploration and production should be subject to close surveillance by an adequately staffed and equipped enforcement agency, and called for "a significant increase" in the technical capabilities of the federal agency responsible for offshore monitoring, including consideration of transferring responsibility from the U.S. Geological Survey to the Environmental Protection Agency.

Further, the directors said, exploration and development must be subject to automatic, heavy fines for all oil spills, regardless of cause, and any willful violation of drilling regulations must result in permanent forfeiture of the lease on which the offense occurs.

The directors also went on record opposing the leasing of lands beyond 200 meters depth until international agreements on ownership of the sea floor resources have been reached.

The board also opposed any general program to lease federal oil shale reserves for production until research is completed showing that environmental problems can and will be solved or at least reduced to "a reasonably acceptable level."

The directors resolved that the club "also opposes a major prototype program that really amounts to beginning broadscale production in advance of adequate answers from research on solutions to environmental problems."

The club favors a modest prototype oil shale program emphasizing the least environmentally damaging development methods, such as underground mining in connection with dawsonite or nacholite development and *in situ* fracturing, except by nuclear explosions.

Federal and private research and any prototype program, the directors said, should answer these environmental problems:

- Ways to avoid adverse impacts on surface resources, including wildlife habitat, forage, native ground cover, wilderness, and scenic values;

- Feasibility and practicality of reclaim-

### CALIFORNIA MEMBERS

#### June: The Great Opportunity for Gas Tax Diversion

DIVERSION OF GAS TAXES to build rapid transit systems is a must—to meet the energy crisis, to reduce automobile smog, to control suburban growth. In California such diversion requires amending Article XXVI of the State Constitution, which now locks up one billion dollars of gas tax money each year solely for highway construction. (See editorial in the March, 1973, *Bulletin*.)

The opportunity to change this situation comes on the California June primary ballot where SCA 15 (Mills) will appear as a referendum measure. The new proposition will rewrite Article XXVI to:

1. Permit use of gas taxes for construction of mass transit systems—*e.g.* stations, rights-of-way, tracks, guideways, *etc.*—everything but rolling stock.

2. Provide money to obtain federal matching funds for 80 percent of construction costs.

3. Authorize money to pay back voter-approved bonds for transit systems.

4. Pay for environmental research and controls on air pollution, vehicle noise, *etc.*

We must pass this measure and cannot allow the highway lobby to defeat it, as they did a similar measure in 1970. The opposition is mobilizing for a last-ditch fight, so we must campaign hard. A defeat would be a disaster for California and set back similar efforts now gaining momentum nationwide.

Members can help by (1) educating fellow citizens, (2) pressing for endorsements by local service organizations and governmental units, (3) contributing to the campaign fund: Californians Against Smog, 424 Pendleton Way, Oakland, California 94621. Your help will be greatly appreciated.

Let's win in June!

ing areas subjected to unavoidable surface disturbances;

- Means of disposing of spent shale tailings to avoid surface storage;
- Ways of preventing increases in the salinity of surface waters and pollution of such waters as well as aquifers;
- Ways to avoid drain upon water resources of the region;
- Ways to assure air quality is maintained;
- Ways to minimize the adverse impact of industrialization on the regional environment.

Meanwhile, the club urges states to strictly regulate oil shale development on private lands to minimize its adverse effect on the environment.

The directors also resolved to urge Congress to provide for the expenditure of at least \$2 billion per year for at least the next five years for federal energy research and development.

To be particularly emphasized in such a program are geothermal, solar, and fusion power; energy conservation and more efficient energy use; hydrocarbon extraction and conversion problems; stripmining reclamation; nuclear safety; nuclear waste management; biological and medical research related to energy source; and instrumentation for monitoring pollution.

### Board looks overseas

The Sierra Club Board of Directors focused on conservation issues outside the United States in resolutions adopted at the board's meeting January 12 and 13.

In a resolution on tropical forestry, the directors urged that soil-vegetation surveys for land-capability-classification purposes be carried out and used in tropical-forest land-control policy before additional forest clearing is permitted.

"Ill-advised conversion of tropical forests, both through shifting cultivation by squatters or government land settlement schemes, is having a devastating effect on tropical forest ecosystems, and not producing a long-term viable agriculture land use," the directors said. Especially critical are steep slopes, erosive soils, and soil where fertility rapidly degrades after trees are removed.

The directors also resolved that forest areas designated to be production units (whether state or private) should be handled with care, "applying the best we know in silvicultural practice and logging techniques to retain these areas in primary tropical forest species; and that multiple-use policy giving regard to important watershed, wildlife, and recreational values be adopted immediately before these values are destroyed by single-minded emphasis on forest exploitation."

The directors agreed that many more

areas of tropical forest should be set aside permanently as parks and reserves.

"The need for these reserves for recreational, scientific or educational use is clear and urgent," the directors said. "Representative areas of most of the remaining significant types of communities with their associated fauna should be identified and set aside. Especially important in this connection are upper watersheds, riverine and estuarine areas, and particularly scenic areas. Superlative stands of complex forests need preservation as national heritage."

The directors also resolved that any planning programs in the world's rainforests must recognize the culture and hu-

## REGIONAL REPS REPORT

### Northern Plains: North Dakota

CITIZEN INTEREST and reaction to energy development assumes a different intensity in each of the states in the Northern Plains. North Dakota is moving to the front in its concern over the plans of outside corporations to "develop" the state's coal and water resources.

So far, the North Dakota state government has withheld approval of large water sales pending a further understanding of the impacts rising out of the sales. The Public Service Commissioner is critical of the state's reclamation law, claiming that proof is lacking that the land can be reclaimed to its original use. He states, "We are already developed. Western North Dakota has some of the world's best agriculture. The return from agriculture over 100 years is potentially much more than a one-time harvest for coal, which could destroy our land."

On the citizen level, the Farmers' Union has led its members in a critical review of the proposed development. The Union urges its members to look ahead and plan. They should investigate those areas already stripmined and see what happens to the tax systems, the water, and the land. The Farmers' Union sees the 1975 legislature as critical to the future of its members and calls for them to decide on a position and get to each legislator prior to the election to find out what his position will be. In its own newspaper, the Farmers' Union said that, "Consumers and farmers have joined together to seek equity in the marketplace by concentrating their efforts on the giants of the food industry, rather than on each other. A confrontation is in the making between the corporations that control the world's energy resources, and a coalition of consumers, farmers, and environmentalists."

The most recent addition to citizen involvement is an organization called the United Plainsmen. A coalition of farmers, ranchers, conservationists, businessmen,

man rights of primitive native peoples living in them.


In other action, the directors strongly urged restoration by Congress of the cut-back of \$2.5 million (from \$10 million to \$7.5 million) in the United States contribution to the United Nations Environment Fund.

"This unilateral renegeing of a pledge made in 1972 at the Stockholm United Nations Conference on the Human Environment represents an inexcusable breach in honoring a commitment openly given and already relied upon by the United Nations," the directors said.

and professional people, the group hopes to create a grass-roots movement that can make a well-reasoned contribution to the decisions on coal and water development. The farm and ranch organizations of Montana and Wyoming would do well to follow the lead of North Dakota.

Laney Hicks


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## REGIONAL REPS REPORT

## Alaska: Preserving the Public Domain

**A** RECKLESS SCHEME," said Senator Mike Gravel (D-Alaska). "A disservice to the state," was Federal-State Land Use Planning Commission State Co-Chairman Joe Josephson's opinion. "Apalling plans," asserted Republican Senator Ted Stevens. "It is the most outrageous thing ever to happen to Alaska," said former Democratic Senator Ernest Gruening. "Shockingly bad" and a "national fright," editorialized the development-crazed *Anchorage Daily Times*. "A purgatory self-imposed," was state Natural Resources Commissioner Charles Herbert's reaction.

And so it went during the final six weeks of 1973, as Alaska's politicians and press vied with one another in condemning a proposal by Secretary of the Interior Rogers Morton to transfer 83 million acres of federal lands into the national wild and scenic rivers, wildlife refuge, park, and forest systems. These were the public lands Congress directed Morton to withdraw and study as part of the Alaska Native Claims Settlement Act of 1971. The political furor followed a leak to the Alaska press that Interior had briefed Club officials and other national conservationists in mid-November, as well as having talked to Alaska Republican Senator Ted Stevens. Governor William Egan, a Democrat, had to call Washington to ask for a similar briefing. Once given an outline, but not specific details, these politicians then put maximum political heat on Morton in an unsuccessful attempt to get him to modify his plan before submitting it to Congress in mid-December.

As it turns out, it is hardly the radical proposal portrayed by the state's politicians. Take the 31.6 million acres of proposed new national wildlife system units, for example. Three-quarters of this land would be open to mining, oil, and gas development under a permit and lease system; the remaining 7.6-million-acre proposed Noatak National Arctic Range is not in an oil and gas province.

About half the proposed new refuge acreage covers pothole lakes and sloughs along the Yukon River. These waterfowl areas, while important, are not nearly so threatened as upland habitat elsewhere. But the Bureau of Sports Fisheries and Wildlife was gun-shy about challenging the state for control of upland areas containing "resident" species such as caribou and brown bear, which the state claims as its very own. One of the most important such areas (particularly for brown bear) left unprotected was the federal portion of the Alaska Peninsula below Katmai National Monument.

About 75 of the 83 million acres would be

open for regulated sport hunting; five of the proposed park units would be closed. All 83 would continue to be open for subsistence hunting and fishing, primarily by Alaska Natives.

Of the imposing-sounding 32 million acres suggested as new units of the national park system, about a dozen are purely symbolic parkland, consisting of some of the highest, iciest, and most sterile terrain in the nation. With the possible exception of the Chukchi-Imuruk and Cape Krusenstern units in northwest Alaska, none of the park units are of interest to the oil and gas industry. Interior also took care that its original withdrawals for potential parks excluded most of the known hard-rock mineral areas, even though some vital lowland wildlife habitat and usable wilderness was excluded in the process. For example, most of the south slope of the central Brooks Range was turned over to the miners who set the Egan Administration's land policies.

Wild and Scenic designation proposals are fairly modest because of the problem of rivers crossing various land ownerships. About 2,100 miles are proposed for design-

nation within the larger park, forest, and refuge units, while only four, totaling 820,000 acres in the rivers corridors, would lie outside these larger blocks.

Morton has recommended that 18 million acres be added to the 20 million now being managed (and much of it not too well) by the Forest Service. The big disappointment to conservationists was his decision to propose handing over choice parts of the Wrangell Mountains country to Interior's historic rival. If accepted by Congress, the Park Service would be left mainly with millions of acres of icecaps and glaciers on the Wrangell massif. Some valleys and lowlands could ultimately be protected in a park provided Congress rejects the Forest Service's bid for the Wrangells. Copper River area Indians will select part of these timbered lowlands, and they want the remainder in a national park.

Farther north, Interior's plan would put the Forest Service in control of the eastern Yukon Flats, which would give it about as much waterfowl habitat as the Bureau of Sports Fisheries and Wildlife would have in the western portion of the flats. More important, the adjacent forested uplands that might go to the Forest Service are used as wintering grounds by the Porcupine caribou herd, the state's second largest. While it would be difficult for the Forest Service's multiple-use policies to do much damage to

*Continued on page 31*

## SIERRA CLUB ELECTION

Each year, the annual national election of the Club is on the second Saturday of April as prescribed by the By-laws. On April 13, 1974, five directorships will be at issue. A ballot, information brochure, and return envelope (not postage-paid) will be mailed by March 1 to each eligible member. Those packets for members living outside the 48 contiguous states will be sent airmail. With the exception of junior members (under 15 years), all those listed in the Club records as members in good standing as of January 31 (about 140,000) will be eligible to vote.

The eight candidates for Directors are, in order of appearance on the ballot: Richard Cellarius, Theodore Snyder, Jr., June Viavant, Lowell Smith, Claire Detric, John Broeker, Mary Jane Brock, and Brant Calkin. Members should vote for not more than five candidates.

The information brochure will contain a statement from each candidate regarding pertinent background and his or her views as to the direction the Club should take, together with a picture.

If you do not receive a ballot by mid-March, or you mismark it, do this: Write a note of explanation to the following and enclose the voided or mutilated ballot if you have it: CHAIRMAN, JUDGES OF ELECTION, Sierra Club, Department E, 1050 Mills Tower, San Francisco, California 94104. If addressed any other way, it will get delayed attention. After appropriate checking, an attempt will be made to send you a replacement ballot in time for it to be returned by the date of the election. This procedure is under the control of the Judges of Election. Ballots are to be mailed back to Elections Committee, Post Office Box 12975, Oakland, California 94604. They will not be opened until the time for counting.

The prepunched holes at the bottom of the ballot card will indicate to the computer that the ballot comes from a member eligible to vote. However, the unique, random number bears no relation to a particular member or membership number. Thus secrecy of voting is assured.

*Lewis F. Clark*  
Chairman, Judges of Election

**SIERRA CLUB FINANCIAL REPORT**

To the Members of the Sierra Club:

The Club's operations for the year ended September 30, 1973, produced a \$253,636 surplus against a budgeted surplus of \$50,000. As a result, this was the Club's most successful year financially. Unlike 1972, when the year's \$99,433 surplus was buoyed by two extraordinary income items totalling approximately \$250,000, last year's favorable results were achieved because of higher than expected operating revenues and tighter control of expenses.

A major portion of the increased revenues came from dues and admissions. Although growth in membership amounted to only 2.2 percent for the year, revenues rose 12.1 percent which is attributed primarily to improvements in the processing of dues renewal billings. In addition, both the Publications and Outing programs contributed to the surplus over budget as well as exceeding their 1972 performance.

Notwithstanding the Club's financial improvement, the Club continues to have cash problems. The budget adopted by the Board of Directors for the current year again provides for a surplus of \$50,000 as a continuing step toward strengthening the Club financially.

PAUL SWATEK, *Treasurer*  
DAVID W. HARRIS, *Controller*

**REPORT OF INDEPENDENT ACCOUNTANTS**

To the Board of Directors and Members of the Sierra Club

In our opinion, the accompanying statements of financial position and the related statements of revenues and expenses and of changes in fund balances present fairly the financial position of the Sierra Club at September 30, 1973 and 1972, the results of its operations and changes in fund balances for the years then ended, in conformity with generally accepted accounting principles consistently applied. Our examinations of these statements were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances, including at September 30, 1973 and 1972, confirmation of marketable securities owned by direct correspondence with the custodian. It was impracticable for us to extend our examination of contributions received from the general public beyond accounting for amounts so recorded.

PRICE WATERHOUSE & CO.

DECEMBER 20, 1973  
San Francisco, California

**NOTES TO FINANCIAL STATEMENTS  
SEPTEMBER 30, 1973**

NOTE 1—Summary of significant accounting policies and chapter organizations:

The accounts of the Club are maintained generally on the accrual basis except that members' dues, which are billed in advance, and gifts and bequests from the general public are recorded as revenue on a cash basis when received; land, buildings, furniture and equipment owned by the Club and held or operated for use by its members, guests or the public are expensed when purchased by the Club.

**FINANCIAL STATEMENTS AND AUDITOR'S REPORT**

**STATEMENTS OF FINANCIAL POSITION**

	<i>September 30</i>	
	<u>1973</u>	<u>1972</u>
<b>ASSETS:</b>		
Cash (Note 2)	\$ 12,463	\$ 47,161
Accounts receivable, publications, less allowance for doubtful accounts of \$21,000 in 1973 and \$37,000 in 1972	54,654	100,602
Other receivables	93,896	204,942
Inventories, principally publications, at the lower of cost ( <i>first-in, first-out</i> ) or market	312,294	278,158
Marketable securities, at cost, market value \$659,200 in 1973 and \$511,000 in 1972, pledged as security for notes payable to bank (Note 2)	521,881	369,166
Royalty advances, travel deposits and other deferred charges	173,567	117,715
	<u>1,168,755</u>	<u>1,117,744</u>
<b>LIABILITIES:</b>		
Notes payable to bank—secured by marketable securities (Note 3)	237,263	315,690
Other notes payable (Note 3)	3,000	178,000
Accounts payable	391,459	417,293
Accrued salaries and other expenses	116,036	135,687
Advance travel reservations, royalties, publication sales and other deferred revenues	225,207	128,920
	<u>972,965</u>	<u>1,175,590</u>
<b>NET (deficit) ASSETS</b>	<u>\$ 195,790</u>	<u>(\$ 57,846)</u>
<b>FUND BALANCES:</b>		
Unrestricted fund ( <i>deficit</i> )	(\$ 554,589)	(\$796,410)
Restricted funds	186,337	186,539
Permanent fund	564,042	552,025
	<u>\$ 195,790</u>	<u>(\$ 57,846)</u>

During August of 1972, the Club was notified by the executor of an estate, of which the Club was a beneficiary, that securities with an approximate market value of \$100,000 had been designated as distributable to the Club; a contribution in that amount was recorded in fiscal year 1972. The assets related to this bequest, having an aggregate market value on the dates of receipt of \$120,729, were distributed to the Club during fiscal year 1973.

The Club's various chapter organizations are accounted for separately and are not included in

the accompanying financial statements except that chapter allocations, amounting to \$309,697 in 1973 and \$313,019 in 1972, are included as expenses. The combined net assets, largely cash, of the chapters and their combined revenues and expenses were:

	<u>1973</u>	<u>1972</u>
	<i>(Unaudited)</i>	
Net assets—at year end	<u>\$201,000</u>	<u>\$186,000</u>
Revenues—fiscal year	<u>\$601,000</u>	<u>\$492,000</u>
Expenses—fiscal year	<u>\$586,000</u>	<u>\$494,000</u>

FOR THE YEARS ENDED SEPTEMBER 30, 1973 AND 1972

STATEMENTS OF REVENUES AND EXPENSES

	Year ended September 30	
	1973	1972
<b>REVENUES:</b>		
Dues and admissions	\$1,847,644	\$1,647,912
Sales of publications	598,587	622,040
Trip reservations and fees	827,601	783,391
Contributions	413,639	329,914
Royalties	150,872	129,260
Life memberships	12,005	16,747
Other revenues and investment income	125,887	233,693
	<u>3,976,235</u>	<u>3,762,957</u>
<b>EXPENSES:</b>		
Salaries and employee benefits	871,965	845,281
Charter transportation and trip supplies	505,037	479,000
Outside contract services	302,046	421,167
Cost of publications	286,730	336,477
Printing	228,973	221,090
Chapter allocations (Note 1)	309,697	313,019
Office supplies and mailing	379,716	296,871
Travel, meetings and elections	246,207	215,220
Royalties	94,310	108,888
Rent and office expenses	122,213	142,467
Photography and exhibits	36,185	12,415
Telephone	99,088	96,622
Advertising	120,927	68,973
Insurance	50,287	41,442
Interest	13,999	15,204
Other expenses	55,219	49,388
	<u>3,722,599</u>	<u>3,663,524</u>
<b>EXCESS OF REVENUES OVER EXPENSES</b>	<b>\$ 253,636</b>	<b>\$ 99,433</b>

STATEMENTS OF CHANGES IN FUND BALANCES

Years ended September 30, 1973 and 1972

	Unrestricted Fund	Restricted Funds	Permanent Fund	Total
<b>FUND BALANCE AT October 1, 1971</b>	<u>(\$ 880,571)</u>	<u>\$188,014</u>	<u>\$535,278</u>	<u>(\$ 157,279)</u>
Revenues	3,745,410	800	16,747	3,762,957
Expenses	3,661,249	2,275		3,663,524
Excess of revenues over expenses (expenses over revenues)	84,161	(1,475)	16,747	99,433
<b>FUND BALANCE AT September 30, 1972</b>	<u>(796,410)</u>	<u>186,539</u>	<u>552,025</u>	<u>(57,846)</u>
Revenues	3,963,418	800	12,017	3,976,235
Expenses	3,721,597	1,002		3,722,599
Excess of revenues over expenses (expenses over revenues)	241,821	(202)	12,017	253,636
<b>FUND BALANCE AT September 30, 1973</b>	<u>(\$ 554,589)</u>	<u>\$186,337</u>	<u>\$564,042</u>	<u>\$ 195,790</u>

NOTE 2—Restricted cash and marketable securities:

Cash on deposit of \$1,218 at September 30, 1973 and \$42,637 at September 30, 1972 represents proceeds from the sale of securities and is restricted to reinvestment in securities.

Marketable securities comprised:

	September 30,		September 30,	
	1973	1972	1973	1972
	Cost	Market	Cost	Market
U.S. Government bonds	\$ 65,145	\$ 63,600	\$ 40,020	\$ 40,400
Corporate bonds	153,130	135,700	54,943	42,600
Preferred stock	10,000	7,600	10,000	9,100
Common stock	293,606	452,300	264,203	418,900
	<u>\$521,881</u>	<u>\$659,200</u>	<u>\$369,166</u>	<u>\$511,000</u>

NOTE 3—Notes payable:

At September 30, 1973, the Club had a revolving line of credit of \$450,000 with a bank at the bank's prime interest rate. Borrowings are secured by the Club's marketable securities.

The other note payable at September 30, 1973 is unsecured and is not interest bearing.

NOTE 4—Tax status:

The Club qualifies for tax-exempt status under Section 501(c)(4) of the Internal Revenue Code as a civic organization operated exclusively for the promotion of social welfare whereby only unrelated business income, as defined by the Code, is subject to income tax. Under this section of the Code, a contribution to the Club is not deductible for tax purposes by the donor. Previously, the Club qualified for tax-exempt status as an educational and scientific organization under which contributions were deductible. The Internal Revenue Service revoked this status in 1968. The Club does not concede the validity of the revocation.

NOTE 5—Pension plan:

The Club has an insured pension plan covering employees who have been engaged for more than one year and are at least thirty years of age. In addition to contributions by the Club, participating employees contribute a portion of their salaries to the plan. Total pension expense for 1973 and 1972 was \$8,464 and \$5,828, respectively, which includes amortization of prior service cost over a 30-year period. At September 30, 1973, the assets of the plan exceeded the actuarially calculated value of vested benefits. The estimated unfunded prior service liability at September 30, 1973 is approximately \$35,000.

NOTE 6—Lease commitments:

The Club's office facilities and certain accounting equipment are leased under agreements expiring 1974-1977. These leases provide for minimum annual rental payments of approximately \$83,000.

NOTE 7—Contributions from The Sierra Club Foundation:

The Club receives contributions from The Sierra Club Foundation in support of programs that are nonlegislative in nature. In addition, during the years ended September 30, 1973 and 1972, the Foundation paid directly on behalf of the Club approximately \$398,000 and \$310,000, respectively, of such nonlegislative expenses; these direct payments have not been included in the accompanying financial statements.

NOTE 8—Subsequent event:

In October 1973, a portion of the Club's inventory of publications was destroyed by fire. The Club is in the process of filing a claim with its insurance carrier and does not anticipate any adverse effect on its financial position as a result of this fire.

To: William Simon, Director, Federal Energy Office  
From: The FEO Environmental Advisory Committee  
Subject: Energy, Conservation, and the Quality of Life

*The following letter was submitted to William Simon, Director of the Federal Energy Office, on January 11 of this year. In it, Laurence I. Moss, Chairman of Federal Energy Office Environmental Advisory Committee (and President of the Sierra Club), sets forth the initial views of the distinguished committee assembled to assist our new "Energy Czar" in formulating policies for a society that can live within a reasonable energy budget.*

THE FEDERAL Energy Office Environmental Advisory Committee met on December 21, 1973. Since you were unable to attend and Deputy Director Sawhill could attend only part of the meeting, the committee wishes to convey to you personally by means of this letter its initial views concerning priority needs and policies with respect to meeting the nation's energy problem. In addition, we offer brief remarks regarding the organization and operation of the committee in light of our desire to develop an effective advisory mechanism. We expect to expand upon these initial views and develop detailed recommendations on specific issues over the next few months.

It is important to emphasize at the outset that we agree with you that the "energy crisis" is a long-term, not simply a short-term, problem. It is critically important that the public also understand this fact; this will require proper dissemination of information on a regular basis, particularly information which places short-term, immediate energy conservation requirements in the context of the long-term need. Furthermore, it is imperative that actions be taken now to begin the process of shifting from the more energy-intensive activities and patterns of development to those which are efficient in their use of energy. We must learn, in short, to do more with

less. We must also undertake at the same time to reduce the environmental and social costs of our current and prospective energy supply technologies. In most cases, overall environmental impacts can be decreased even while making new supplies available. These considerations should guide federal energy policy-making.

In this letter, we address four major topics: methods for conserving energy; energy supply issues; organization and operation of the Federal Energy Office; and the role of this Environmental Advisory Committee. We offer a number of recommendations for your consideration.

#### Energy Conservation

*Energy Prices.* We generally subscribe to the view expressed by President Nixon in his energy message of April 18, 1973: "... we should recognize that the single most effective means of encouraging energy conservation is to ensure that energy prices reflect their true costs." Unfortunately, current federal policy is not in accord with this view.

First, the energy companies are the beneficiaries of a panoply of subsidies: the foreign tax credits for what are really payments for royalties or shares in ownership, the depletion allowances, the write-off of "intangible drilling costs," the tanker subsidy program. These have the net effect of pricing energy below its full cost. Someone has to pay, of course. Thus, these subsidies, which are paid for by taxes, impose a net transfer of income from those who use less than the average amount of energy to those who use more. This is particularly inappropriate now when you and the President are appealing to the public voluntarily to conserve energy in the national interest, since those who do respond and cut back on their energy use subsidize, through their taxes,

those who waste energy. These subsidies can no longer be justified. We ask you to recommend to the Congress that they be eliminated. In the case of the foreign tax credits, all that is necessary is a change in IRS rules.

It is significant that Atlantic-Richfield, the fourth largest producer of domestic oil, announced a few days ago that it now favors repeal of the depletion allowance. Parenthetically, we also note that experts have stated that adequate economic incentive to develop domestic supplies exists when the price of imported oil is above about \$5 a barrel. The price is now approaching, and in some cases exceeding, \$10 per barrel. The subsidies are therefore not needed for that purpose.

Second, pricing policy for electricity and gas should be changed. The basic principle to implement is that of long-run incremental cost pricing, with all costs incorporated. The present policy of rolled-in average cost pricing encourages a misallocation of resources into expensive new capacity to supply a demand which is artificially stimulated by low prices. Incremental cost pricing, if applied, will result in flatter (and higher) rate structures and thus encourage energy conservation. If, in the short term, excess (windfall) profits are generated, this problem can be met by other means, such as an excess profits tax.

The question whether or not well-head prices of gas should be deregulated is a difficult one. Prices of gas should indeed be higher, at the level of incremental costs. If the gas supply industry is competitive, deregulation will achieve this. If it is not workably competitive, deregulation is likely to result in high prices for purchasers who have no choice and low prices for those who have alternatives, with more than the optimum quantity of gas being consumed.

We recommend that you support measures which would result in incremental cost pricing of electricity and gas, and that you examine the gas supply industry to determine if it is competitive. In addition we suggest that you inform the commissioners of the Federal Power Commission, the officials of the appropriate state regulatory agencies, and the federal energy agencies (TVA, Bonneville Power, Bureau of Reclamation, etc.), of the long-term benefits of incremental cost pricing.

*Specific Energy Conservation Measures.* The committee believes that a promising start has been made by your office in initiating specific measures to conserve energy. Further steps will of course be needed; we expect to discuss and bring to your attention those which we think have particular promise. At our first meeting there was agreement that much more can and should be done to encourage greater use of secondary materials. Higher prices for energy and for virgin materials will help bring this about, but institutional and artificial economic barriers should be removed where they are found to exist, in order to speed the process. Depletion allowances, for example, give a perverse incentive in that they encourage utilization of virgin raw materials—with consequent high use of energy—over utilization of the scrap pile. Freight rates should also be examined and modified as necessary. The use of excessive packaging should be discouraged, and non-returnable beverage containers phased out.

We would like to assist you in formulating policies to reduce the amount of solid waste being generated and to recover materials and heat values from that which remains. Accordingly, we would appreciate knowing what plans the Administration has in this regard.

We share your view of the importance of reducing the number of vehicle-miles travelled. Developing successful models for car pooling would be of great assistance in this respect. We also stress the importance of proceeding as rapidly as possible to improve public transportation systems in urban areas, to reevaluate the need for proposed urban highways so as to eliminate the unnecessary ones, and to encourage the development of and shift to more energy-efficient transportation alternatives, such as exclusive bus lanes, bicycle paths, and even

walkways for urban transportation. In the field of commercial air transport, which is the most energy-intensive form of public transportation in common use, a significant (10 to 20 percent) reduction in airplane miles travelled can be accomplished, with no reduction in basic transportation effectiveness, by converting to all-coach configurations. (The typical first class seat takes up 60 percent more space than the coach seat. To use it, the first-class passenger pays a premium of only about 30 percent over coach fare. First-class sections priced this way can be justified only under a philosophy of operation at low yield factors, a philosophy which is no longer in the public interest.) There are, of course, other ways of saving fuel used in air transport, which should be implemented, including reductions in the number of flights to increase load factors, and flying at lower speeds. In transporting freight by truck, the elimination by the ICC of the "gateway" concept would significantly shorten many routes.

We note that if one-half of the freight and one-third of the passenger traffic were shifted to the more efficient methods—bus, railroad, and waterway—about 20 percent of the energy used in transportation and 5 percent of all energy used in the nation would be saved.

In choosing among energy conservation alternatives, our committee expressed substantial disagreement with the idea that preserving all jobs should always take precedence over other societal values. Certain jobs, such as those in manufacturing non-returnable containers or in operating airplanes half empty, are associated with waste of energy.

The important point is to shift to more energy-efficient activities and patterns of development. The role of government should be not so much to prevent all job losses as to orchestrate a transition to an energy-efficient economy by attempting to create new jobs in energy-efficient activities which roughly make up for the losses elsewhere. This will no doubt require a blend of carefully conceived macroeconomic policies, subsidies to particular energy conserving activities such as public transportation, overcoming of non-economic obstacles to innovation in the private sector, and perhaps even government intervention as an employer of last resort.

*Energy Impact of Major Federal Actions.* An important component of energy conservation is to make sure that the energy impacts of existing and proposed major federal actions are identified and properly considered. We recommend that you ask CEQ Chairman Russel Peterson to review current guidelines promulgated under NEPA, and impact statements themselves, to determine if complete information on energy impacts is being made available. If that is not the case, further steps should be taken.

"*Truth in Energy.*" It is also important that people know the energy impact of their individual purchases. Accordingly, we recommend that the federal government institute a "truth in energy" program in which it would be mandatory to indicate, by label, the energy required to produce and operate products using significant amounts of energy. The information should be expressed in easily understandable units and include an estimate of dollar costs to purchase energy for operation.

## Energy Supply

*Are Environmentalists Responsible?* Our committee expressed concern with the statements made by a number of industry leaders and Administration spokesmen that environmentalists bear major responsibility for the energy crisis. The facts are clearly contrary: environmentalists' activities have had at most a nominal or marginal impact on the current energy situation. Commissioner Doub of the AEC recently published statistics which show that environmental objections caused probably no more than a small fraction (3.5 percent) of nuclear power plant-month delays for plants scheduled to begin operations in 1973. A March, 1973, FPC study of non-nuclear powerplant delays reached a similar conclusion for those plants. On the matter of the construction of domestic refineries, it is clear that these were not attractive to major oil companies because of the oil import quota program, which they supported. It is also worth noting that, according to an analysis by the U.S. Geological Survey, if the Trans-Alaskan Pipeline were built to the original design submitted by the oil companies, it would have failed catastrophically.

With respect to the energy impact of pollution control devices on automobiles, measurements by EPA show

that there has actually been an *increase* in fuel economy for cars weighing less than 3,500 pounds. The overall decrease in fuel economy which has taken place is due to a combination of a shift (until very recently) to heavier cars, greater use of power-consuming optional equipment, and the relatively poor performance of pollution-abatement devices on heavier cars. Environmentalists can hardly be held responsible for the auto industry's strategy of manufacturing and promoting the heavier vehicles.

We would like, incidentally, to have a clear understanding of FEO's position with respect to modification of Clean Air Act requirements for the automobile.

Moreover, environmentalists were among the first to call for energy conservation, to point to the unacceptable consequences of continued exponential growth in consumption, and to support the development of more acceptable energy supply technologies so that reasonable quantities of energy can be proved at acceptable environmental cost.

We bring this to your attention because if one has a mistaken idea of how a problem developed then one is unlikely to arrive at its solution. In addition, it is important that the public and other decision-makers be properly informed.

*Minimizing Adverse Impact.* The most important objective concerning energy supply is to find ways to minimize the adverse social and environmental impact of increasing energy supplies. Only if energy and environment are considered together will an acceptable result be achieved.

To accomplish this will require a vigorous effort in a number of areas. Included in this are baseline studies of existing conditions, impact and monitoring studies, and health effects studies. There is a need to establish effective regulatory machinery at appropriate levels of government, by for example, full funding of the Coastal Zone Management Act and strict regulation of strip mining to insure adequate reclamation where that is possible and no such mining where it is not. The Administration has not given its support to effective measures. (We expect to make a detailed recommendation to you on these matters at our next meeting.) Additionally, it hardly needs emphasizing that the development and implementation of pollution

abatement technology must be accelerated.

*Internalizing Social and Environmental Costs.* This brings us to a general problem which has impeded progress: in most cases, industry minimizes *its* costs by continuing to pollute or otherwise not acting vigorously to reduce social and environmental costs because these costs are not internalized. The public bears these costs. Thus, the U.S. Treasury—not the coal companies or the ultimate users of coal—pays approximately \$1 billion per year to compensate the victims of black lung disease. The victims—not the electric utilities or the ultimate users of electrical energy in proportion to their use—pay for the health and property damages arising from emission of air pollutants from powerplants. (EPA's estimate of this damage is in the neighborhood of \$10 billion per year.)

It is vital, then, to seek ways of internalizing these costs. One way, for example, is to impose a charge on emissions of sulfur oxides as has been proposed by the Administration and others. The charge must be high enough to exceed the cost of pollution abatement, at least until, on the average, socially acceptable levels of environmental quality are achieved. In the case of sulfur oxides, a nationwide charge of about 25 cents per pound of emitted sulfur has been estimated to be appropriate.

*Allocation of Available Low-Sulfur Fuels.* In the near term it is important to allocate low-sulfur fuel to where it is needed most—where pollution problems are worst or where the number of people exposed is the greatest. We are not satisfied, and we are sure you will agree, that adequate information for decision-making is being made available on production rates, rates of importation, and quantities in inventory of fuels of varying sulfur content. We also believe that it would be a mistake to allow the use of high-sulfur fuel if low-sulfur fuel is available or, otherwise, without using pollution abatement equipment or processes to reduce emissions to acceptable levels.

Regarding conversion of oil- or gas-fired power facilities to coal, we urge that explicit criteria for ordering such conversion be developed and be made public. We would be pleased to assist in formulating the criteria. One such criterion we can recommend, for rea-

sons already described, is that polluters not be permitted to reduce their costs by using dirtier fuels when the overall cost to society of so doing is increased. A tax on emissions is the appropriate remedy.

Further, it is important that polluters who are given variances from the Clean Air Act to permit them to convert to dirtier fuels be required to enter into contractual commitments to install constant emission control devices no later than July 1, 1977, as specified in the initial emergency bill passed by the Senate. We ask you to support this provision in legislation.

More generally, we feel that a formal, cooperative administrative procedure involving FEO and EPA should be established, well publicized, and implemented nationwide, with the object of insuring that variances are indeed necessary and in effect only as long as absolutely required.

*Solar Heating.* Up to now, the use of solar energy has been the poor stepchild of energy supply technologists. It is time to correct this situation. As Dixy Lee Ray pointed out in her recent report to the President, there is no technological obstacle to the widespread use of solar energy in low-grade heating applications, such as space and hot water heating, which account for 20 to 30 percent of all the energy used in this country. We urge you, in concert with other agencies including the NSF, NASA, GSA, FHA and HUD, to move effectively to overcome the institutional barriers to the rapid development of a mass-production solar heating industry.

### Organizational Implications for EPA

If you are to act quickly to resolve problems of providing increased supplies of energy at acceptable environmental costs, your organization needs the capability to identify environmental problems, assess alternatives, and take appropriate action. For example, the refusal of the Office of Management and Budget to fully fund the Coastal Zone Management Act (\$42 million per year) may jeopardize the Interior Department's plans to lease new off-shore areas for oil development, since the lack of adequate planning and procedures to control and minimize coastal zone impact will rightfully increase public concern about the leases. Aside from the financial absurdity of OMB's position (high

bids from the last sale totalled close to \$1.5 billion), it is simply bad public policy not to make adequate resources for coastal zone management available to the states. We recommend that you advise the President and OMB to do so. But to return to the main point: There are many ways, of which this example is one, in which your organization can promote its mission by working for more adequate consideration of environmental factors.

This applies as well to FEO's own decision-making. Your organization should have the capability of examining and reporting on the environmental impact of its proposed actions.

### The Role of Our Committee

It seems to us that, if our committee is to serve a useful purpose, it should interact with you and your assistants when proposals are at the formative stage. Communication should be two-way: We need to know what you are thinking as much as you should know what we are thinking. For our part, we will have to develop mechanisms for providing rapid response in order for our advice to be given proper consideration. I am sure we are prepared to do so if we believe it is for a serious purpose.

*Laurence I. Moss*

President,  
Sierra Club  
Chairman,  
Environmental Advisory Committee

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## NATIONAL ENERGY CONSERVATION PROGRAM— Notes from an Environmental Protection Agency Report

Whether or not one believes that the present energy crisis is at least in part a manufactured inconvenience, the fact remains that if we continue our patterns of energy use, the day will come when we will not be up against a temporary crisis—we will have met disaster.

There are those who would say that the environmental movement of the past several years has somehow "caused" the current problem. In an effort to refute this notion and to establish some guidelines for future energy use, the Environmental Protection Agency (EPA) issued a "position" paper in December, 1973, on the energy crisis. Reasonably enough, one of the first facts this report established was that "the goals of protecting our environment and of having adequate energy supplies . . . are compatible. Both involve a transition from current ways of thinking about how we live and how we use our resources." Even more to the point, the report emphasizes that "Hasty measures taken now to solve short-term energy shortages may lead to environmental problems that will haunt us for a very long time." It went on to say that "relaxation of [environmental] restraints will not release substantial energy, especially in the short term. Further, it must be remembered that environmental constraints have an important purpose. Relaxing them would effect a cost to public health significantly higher than the benefits of the marginal increase in energy supply."

What, then, would the EPA have us do toward solving current and potential energy problems? Quite a lot. Among the report's suggestions are three which we feel are worth spotlighting here:

**Resource recovery programs:** For many materials, the energy to mine ore, refine it, and produce a finished product is much larger than that needed to reclaim the materials from waste. For example, the recycling of aluminum can save about 97 percent of the energy involved, and the saving for steel and paper is estimated to be 52 percent and 70 percent. If we add to this the savings involved in converting residential and commercial refuse to a fuel resource, the total resource recovery program could save and/or produce the equivalent of 550,000 barrels of oil per day.

**Transportation control plans:** Control plans for some urban areas have been necessary to reduce pollution to levels needed to protect public health. Some of these plans require reductions in vehicle miles traveled, with a resulting reduction in gasoline consumption. The EPA estimates that by 1977 these plans could yield a savings of 5.2 million gallons of gasoline per day.

**Mass transit:** The EPA has always supported the construction of mass transit systems simply because they provide a low-pollution, energy-efficient alternative to automobile travel. The increased use of mass transit, in fact, is a key element of the agency's transportation control plans and energy conservation strategies.

In these, as in other portions of the report, the solutions offered are neither as detailed nor as comprehensive as we might like. Still, the EPA's position paper is a long step in the right direction—particularly when it points out that "perhaps the greatest irony of this current crisis is that the forthcoming short-term hardships may result in new policies . . . and the 'hardships' themselves may turn out to be benefits which we have desired all along. We may find once again that we enjoy walking."

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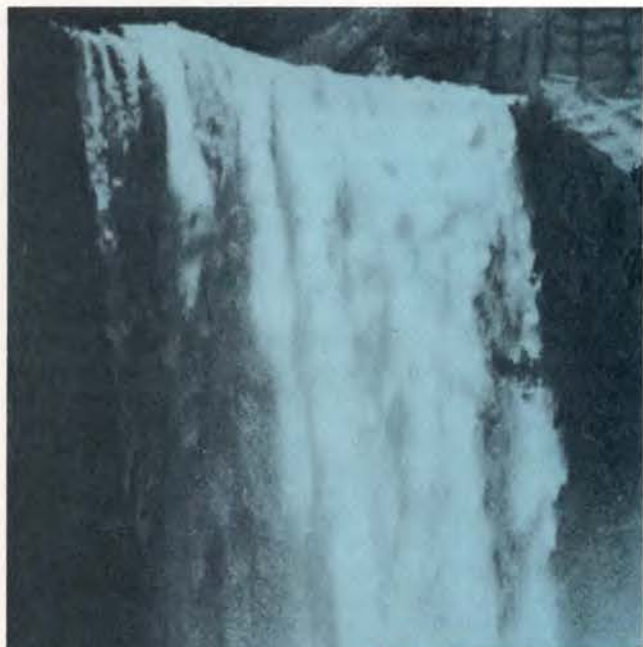
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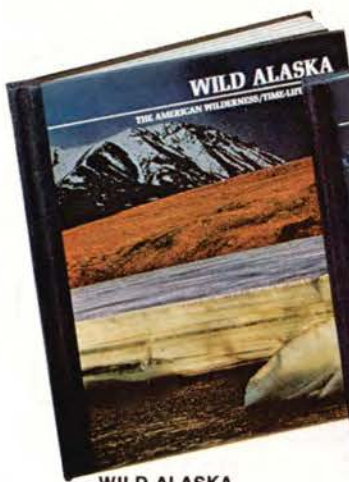
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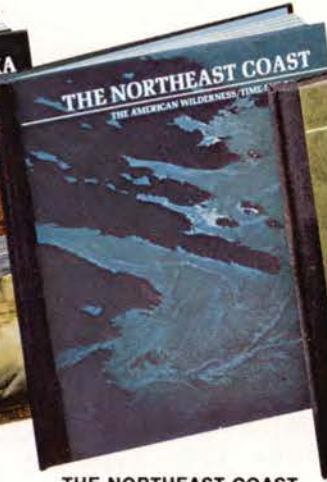
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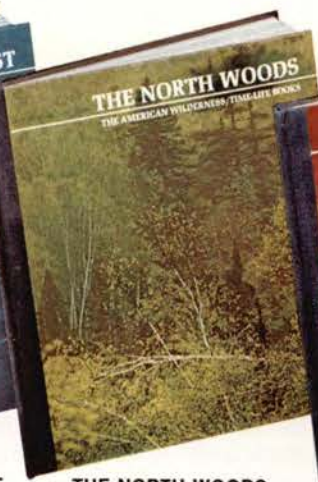




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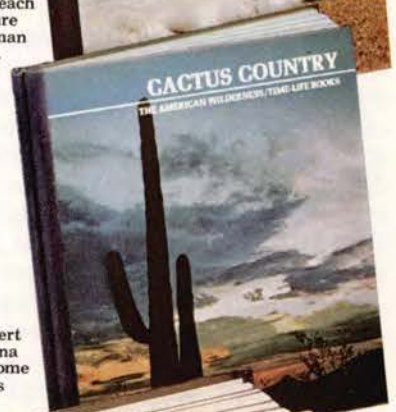
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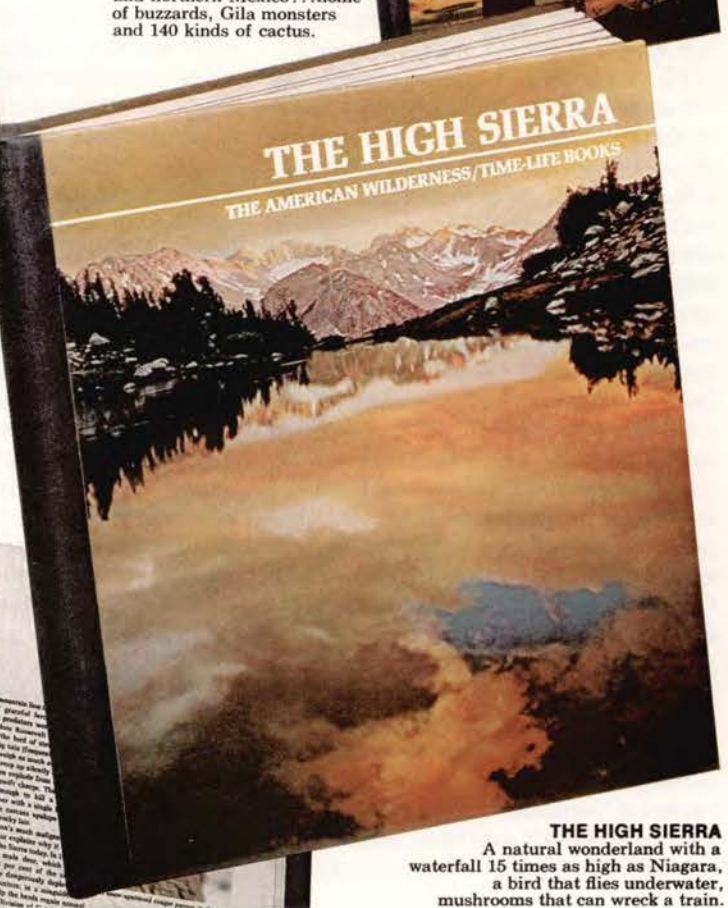
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## To Members About Money and Mission

Dear Sierra Club Member:

**BY** COINCIDENCE, your national Membership Chairman served on the Budget Committee for the Sierra Club this year—was it ever an eye-opener! Two things became apparent immediately. First, there really isn't any fat in our \$4.0 million budget. Second, budget requests for the year from staff departments, volunteer committees, chapters, and groups, exceeded our projected income by over \$500,000. (These, of course, were reduced). In practicing true fiscal responsibility, the budget proposed and adopted was balanced. There never was any chance of funding increases vitally needed to expand ongoing programs, or of establishing new programs, particularly additional regional offices staffed by professional field representatives.

To reduce the expenditure side of a budget all you need is a hatchet, then let the chips fly, and the budget is balanced. To increase the revenue side, however, is much more difficult, yet it is the only answer if the Sierra Club is to do what its volunteer leadership believes it must do amidst recurring environmental crises. Short-term revenue increases can be obtained by appealing to our loyal membership for contributions, but the only long-term remedy is a permanent increase in the size of that membership. We must seek out those who believe, as we do, that environmental activism now will pay off in a better future, and ask them not only to join the Sierra Club, but to join our cause on a long-term basis.

Of the regular annual membership dues of \$15, not more than \$5 is available to support national conservation programs and the regional conservation committees, regional offices, and regional representatives. The rest supports general overhead, allocations to our 44 chapters, member services

in the main office, and the *Sierra Club Bulletin* and other publications. The establishment of a new regional office, complete with professional conservation Field Representatives and the necessary secretarial and support services, requires an annual expenditure of about \$35,000. Funding one new office, then, would require the addition of 7,000 new members on a permanent basis. The Board of Directors would like to fund and establish four additional regional offices. If we can increase our membership by 28,000, we can have the four new offices and spread our influence more evenly throughout the country. 14,000 new members? Then only two new offices, and so on.

We now have 141,000 members (as of December 31, 1973). To recruit 28,000 new members, one out of every five active members must sign up a new one. But that is not the whole story. In 1973, we signed up 40,000 new members, but lost 36,000 existing members. To gain 4,000 members, we needed 40,000 new ones. The ratio was ten to one. If we can't improve that ratio, then it will take two new members for every present member.

It might sound easy to enlist one new member for every five members we presently have. It is going to be much harder to get two for every single member we now have—so difficult that perhaps it is too much to expect in one year. There is another possible remedy. We could try to reduce that discouraging figure of ten to one (it takes ten new members each year to result in a permanent increase of one) to a more favorable ratio by working harder to keep our members active longer. I invite personal letters with suggestions on how we might best accomplish this.

You must agree by now that a membership campaign is worth the effort. Your Membership Committee is now able to promise efficient administra-

tion of membership records in the club office thanks to the installation of excellent modern systems. Errors of great magnitude are a thing of the past—new applications are now processed and placed on the membership list in less than two weeks. This is a fantastic improvement.

Identify potential members among your friends and acquaintances and personally convince them to join us. Schedule membership meetings in your chapters and groups—open meetings to explain current conservation issues and campaigns and to discuss the nature of Sierra Club membership. Establish personal contact with each new member to get him or her involved in our programs. Talk to dues-delinquent members to urge their continuation.

Your Sierra Club National Membership Committee now is prepared to offer Ombudsman Service to members. Each of us represents a region of the country. If you find dissatisfaction with Club administration or staff functions, write to us for help in finding the remedy. If you wish to influence conservation policy, then do so through your local group, chapter, or regional conservation committee.

Let us meet the environmental crisis by pulling together to increase our strength.

*Sanford Tepper*, Chairman,  
National Membership Committee

### *Committee Members and Ombudsmen:*

Northern Calif.: Ed Bennett, 2719 Marin Ave., Berkeley, Calif. 94708.  
Northwest: Doreen Jones, 25 Skyline Park Loop, Eugene, Ore. 97405.  
Southern Calif.: Richard Searle, 4511 Adam Rd., Simi Valley, Calif. 93969.  
Southwest: Betsy Barnett, 4269 Ridgeway, Los Alamos, N.M. 87544.  
Appalachian: Ann Snyder, 2 White-sett St., Greenville, S.C. 29601.  
Northeast: Robert Norman, Math Dept., Dartmouth College, Hanover, N.H.  
Gulf Coast: Lorraine Bonney, 627 E 14th St., Houston, Texas 77008.  
Southern Calif.: Ann Van Tyne, 1319 Panchita Pl., Santa Barbara, Calif. 93103.  
Northern Plains: Norman Nelson, 1111 Ninth St., Rapid City, S.D. 57701.  
Midwest: Marty Sandel, 315 West End, Alma, Michigan 48801.

# The Yosemite Solution to *Ursus Americanus*

GALEN ROWELL

**M**UCH HAS BEEN written about our threatened wildlife: condors, wolves, bighorns, whales—animals with special qualities endearing them to our human fetish for superlatives. The bear is no exception. The grizzly—our country's fiercest land mammal—has not yet made the Endangered Species List but conservationists hope to have the grizzly listed as endangered under the 1973 Endangered Species Act, which qualifies animals "in danger of extinction throughout all or a significant portion" of their ranges. Polar bears are the only animals with the distinction of making both the Soviet and U.S. endangered species lists.

The black bear is at the bottom of the bearpower scale. It lacks the size, aggressiveness, and charisma of its larger cousins. Instead of offering man a fleeting glimpse of wildness, the black bear is usually seen rattling garbage cans, begging at roadsides, or raiding picnic baskets. The largest recorded specimen weighed 690 pounds, ate Yosemite garbage, and was killed by rangers in Camp Curry in 1966.

The cartoon feature, "Yogi Bear," features a plodding, humorous creature in Jellystone Park who robs picnic baskets and causes consternation among tourists and rangers. In many ways the portrayal is amazingly accurate. In one important way it falls short: if the real Yogi had been caught raiding campsites and picnic baskets, even a fraction of the number of times, he would have been humanely dispatched by an overdose of tranquilizers.

While television viewers love to watch Yogi get the best of cartoon tourists, they quickly lose their sense of humor when they become tourists

themselves. This fall, I followed, photographed, and investigated the activities of bears, tourists, and rangers in Yosemite National Park. In order to take photographs, I dodged stones, sticks, pots, and pans intended for the bears. I watched them feed in the concessionaire's completely open garbage bins and in the park service's partially covered dumpsters. I saw tourists feed them and even watched a cook throw an entire roast to one. One moonless midnight I was charged by a sow bear who was protecting two cubs in a nearby tree. I knew empirically that black bears make bluffing charges. I had read the paper of a biologist friend who wrote, "We were charged and warned many times. We came to know . . . the results were predictable and always non-violent—but in the woods that day in April, the first charge had great uncertainty, awesome speed, and grim suggestion."

What did I do when the bear charged me? I screamed—loud and involuntarily.

Black bears have been characterized as "neither vicious nor pugnacious, highly intelligent, often impulsive, and wholly unpredictable." Conversations with habitual Yosemite campers indicate that bears remember aggressive acts and respond accordingly. Several campers have played dirty tricks on bears only to find unusual destruction visited on their property days—or even weeks—later. The tricks of some campers are simple and primitive, such as the case of one who lured a bear with food and dropped a 30-pound rock on his back from an overhanging boulder. The bear groaned, howled, shrugged, and ran. Other tricks are Machiavellian. Several campers have coated pressurized propane cartridges for portable stoves with

honey or peanut butter. When a bear punctures the metal, a cold explosion occurs. In one instance a young man laced a sandwich with LSD. The bear who ate the sandwich caused enough of a ruckus to be subsequently destroyed.

Official statistics for 1973 indicate Yosemite had more than 2.3 million visitors. Only 16 were injured by bears, and that represented an increase of more than 500 percent from 1972. In 1973, 268 "bear incidents" were reported. Property damage amounted to \$24,367 (about 1¢ per visitor), and zero written warnings or citations were issued tourists for their infractions concerning bears.

Efforts to deal with the bear problem have been one-sided. More than 200 bears have been killed by Yosemite rangers since 1960. One of the few obvious correlations in statistics is between the number of kills and the turnover of National Park Service management. While 39 bears were killed in 1963, only four were killed in 1969, when another regime managed the park. Even more striking is the variance between different districts in the park. In 1972 and 1973, the Yosemite Valley District reported 173 property disturbances amounting to \$17,353 damage. The huge Mather District, encompassing everything along the Tioga Pass highway, including Hetch-Hetchy and Tuolumne Meadows, reported 272 property disturbances worth \$29,159. Yet during this same period, rangers in the Valley District killed 21 bears and Mather rangers killed none. Why? Because the ranger in charge of the Mather District believes bears should not be killed except in extreme circumstances. In the last two years, the Valley District has recorded 18 per-



*Bear vs. Volvo at the base of El Capitan.*



*A try at the wing window.*



*A push on the latch. What model is this?*

sonal injuries from bears; the Mather District, one.

A major unknown in Yosemite is the size, distribution, and habits of the local bear population. No census exists for the entire park. A recent census in the seven-square-mile Valley counted 19 bears, although knowledgeable park personnel guess the actual number is somewhat higher. The official estimate of 220-350 bears in the whole park was figured by multiplying a bear-per-mile factor obtained from other black bear habitats in the nation. Killings by rangers account for an alarming percentage of these estimates, although several biologists have assured me that the black bear is far from endangered in Yosemite.

Bear sightings in Yosemite are far more frequent than in pristine times, but we should not be hasty to assume a dramatic increase in the population. The wild, secretive animal of the nineteenth century is today's Yogi Bear. An analysis of bear droppings in Yellowstone campgrounds indicated 89 percent vegetable matter and only 10 percent garbage. Apparently bears are highly dependent on natural food sources for much of their diet, even though they are greatly attracted by human foods. Yosemite bears have recently been found in the Hudsonian and Alpine life zones, far above their normal habitat, indicating either a saturated population in their usual forest habitat, or just possibly, the seeking of human food from alpine backpackers.

Richard Riegelhuth, Chief of Resources Management for Yosemite, was in Sequoia Park when a relatively high bear population experienced a 3-year drought, ending in 1961. Their normal vegetable food source was in very short supply during the months when they needed to build a layer of fat for the winter. Ribs showed through their heavy coats, and they caused an abnormal number of inci-

dents in the park. Riegelhuth began to see them moving west, toward the lowlands. Black bears are not native to the Coast Range or Central Valley, but in the town of Three Rivers, near the park entrance, residents estimated that hundreds of bears were seen that season. Approximately 30 were shot. In the following months bears were reported in the lowland cities of Visalia, Farmersville, Exeter, Porterville, and even Orinda, 150 miles west, near San Francisco Bay. On a foggy morning in the early sixties, a bear even may have walked down Berkeley's Telegraph Avenue, and nobody noticed.

The ramifications of such natural purges are intriguing. Must bears be artificially maintained at a level to prevent such outgoings in the future? Or should nature be allowed to take its course and drive unsuspecting wildlife into highly populated areas?

Maintenance of constant numbers of bears is only one facet of wildlife management. In a paper presented at an international conference on bear research and management, held in Calgary in 1970, John Marsh made the following statement about Canada's Glacier Park: "Unless there are improvements in the knowledge and management of bears, and in the education and behavior of visitors, there seems every reason to believe that man-bear relationships in the park will deteriorate further, causing undesirable stress and danger to both species."

In Yosemite, as well as for the grizzlies of Yellowstone, a controversy revolves around whether there exists a wild, free-roaming bear population somehow distinct from a second group of so-called "rogue" bears. One of the principal rationales for killing "rogue" bears in parks is to make room for a wild bear population that has not been conditioned to a hoodlum existence. In Yellowstone, bi-

ologists have locked horns over this question. Supervisory Research Biologist Glen F. Cole firmly believes in the existence of the "wild" bears. Drs. John and Frank Craighead, who researched bears in Yellowstone for 12 years, state just as confidently that almost all the grizzlies in the large Yellowstone ecosystem sooner or later visit human dumps or garbage.

The life studies of both black and grizzly bears initiated by the Craigheads in Yellowstone have provided much valuable information. Results of their space-age electronic trackings have been published in many national magazines. Much of their research was of long-term significance. Grizzlies often live past the age of 20. Complete life studies have never been made in the wild. The Park Service maintains that the Craigheads' privately financed research was discontinued because they refused to renew the required "Agreement of Understanding" for continued research. The Craigheads reply that the agreement had been revised and "it made a farce of scientific research and muzzled academic freedom. We could not publicly speak on or publish our research without approval from Washington."

The Craigheads recommended a gradual phasing-out of the Yellowstone dumps over a period of years. The Park Service biologists recommended a sudden closure. The Craig-

*Back of Degan's, at the Government Center, a big, bad, black bear rips off an unprotected garbage skip.*





*If it's a '63, a grab with the teeth should do it.*

pressing problem. Policies regarding control . . . are not well formulated and such policies should not be adopted without a full understanding of relationships existing between these animals and the rest of the biota. It is fundamental that studies in life histories be made. . . ." In 1947, Russell became Yosemite superintendent, but even today, such studies have not yet been made, although a cooperative agreement for bear research with the University of California is in the planning stage. No one really knows if there is a wild population "out there." No one knows the extent of the territory covered by bears that visit Yosemite Valley. Are the bears killed in the valley drawn from a population of 20 bears or 200? The question cannot be answered at this time.

On a questionnaire handed to visitors in a park with only black bears, tourists were asked to list behavior they found most troublesome. Almost 60 percent answered either, "coming too close, growling, advancing threateningly or just being around." Only eight percent mentioned injury or property damage. My own belief is that man finds bears objectionable because they challenge his dominance of the wilderness. A bear is large, powerful, and unpredictable, but more likely to avoid aggression toward humans than humans would themselves in similar situations. This summer, a man from Oklahoma hit a bear between the eyes with his fist when it tried to steal food. Instead of killing with a single powerful blow, the bear lightly cuffed the man, who in turn delivered another hard right. The bear walked away.

On a rainy night last year, a young man hunted for a spot to sleep in a rockpile near Yosemite Lodge. Finding an overhanging rock with an alcove just his size, he stretched out his sleeping bag. He was awakened dur-

ing the night by the sensation of being lifted in the air and dropped. It happened again when he lay awake. Something was picking him up under his back, lifting him two feet in the air and letting him go. In the dark shadows he watched a bear's nose nuzzle under his sleeping bag to do it again. That was enough. He jumped up, grabbed his belongings and left the alcove in a hurry. Calmly, a black bear crawled out of the rain and curled up in the alcove.

One friend who has lived and worked in Yosemite for years told me, "I just can't hack bears. They're hopeless vandals and thugs. I know you're right—they're supposed to receive total protection in a national park—but I wish they were all dead. They've done me in so many times. Food, tents. . . ."

When I asked another frequent visitor his opinion on the Park Service's practice of killing troublesome bears, he said, "I'm not sorry to see them killed. As a matter of fact, I'd like to do it myself. They destroyed my camps numerous times and they ripped the door off my father's Mercury station wagon. I couldn't find parts for it, so I had to drive it with a piece of plastic taped over the hole for the last two years I owned it. I hate 'em."

On the other side of the coin, campers this fall witnessed a ghastly spectacle. A ranger, inexperienced with the use of tranquilizer guns, used the wrong charge on a small cub in a tree. Instead of piercing the skin, the entire dart blew a large hole in the side of the cub. It fell from the tree, writhed and died in view of its mother and twin, who were subsequently captured and placed in a metal bear trap on wheels. The dead cub was thrown in the bed of a truck, the trailer was attached, and the whole procession was driven to the Happy Isles Visitor Center, which was closed for the sea-

heads' reasoning was that forcing grizzlies to go "cold turkey" would drive them from the wilderness-accessible and usually people-free dumps, directly into populated areas. In the proceedings of the 1970 International Bear Conference, John Craighead stated: "I would even go so far as to predict that if it's done, there's very likely to be a fatality in Yellowstone." The Park-Service rationale reasoned statistically that a gradual phasing out of the dumps would expose many young bears to human food sources and thus would produce a greater number of garbage-dependent bears in the long run. Professor A. Starker Leopold has called the controversy "one of the most complex and difficult biological decisions of our day."

In the long history of the Park Service, only five deaths by grizzlies had been recorded in all the National Parks of North America until 1970. In 1972, John Craighead's prediction came true. A visitor was killed and partially devoured while camping near Old Faithful. A major legal action is pending in the courts, and one of the named defendants is now a district ranger in Yosemite.

Yosemite has no Craighead brothers. Almost no research has been done on Yosemite's bears. In 1929, a Ranger-naturalist named Carl Russell wrote: "Determination of the status of the black bear in the park is another

*Bear bugs ranger: back of an official's residence a trap is set to catch the stealthy midnight marauder.*



*A completely tranquilized bear. . . . Skinned, the carcass of a dangerous cub lies in a gulch near Cascade Creek.*



*Death and transfiguration. . . . The pelt of the same cub becomes an educational exhibit for "A Year of a Bear's Life."*



son. The dead cub was unloaded, to be skinned for an Indian cultural demonstration. In the circular confines of the culvert trap, the mother and cub went nearly berserk. Flashes came rhythmically from the rotating emergency light on top of the truck, like a torture scene from *Clockwork Orange*.

The light went off. The trap bounced and swung in the darkness as the truck climbed a steep highway out of Yosemite Valley. Unknown to the bears in the trap, they passed within 50 feet of the cub's final resting place, a cliff next to the main road. The truck continued for many miles before stopping in the back country. Someone opened the door of the trap. Two bewildered bears stumbled into the darkness.

How will they react in their next encounter with humans? Nobody knows.

I saw the cub. His body lay on a rock below the cliff where more than 20 bears have been dumped by rangers in the past two years. Carcasses and bones dotted the scene, invisible from the highway through the closed-canopy oak forest. Except for the smell.

I took photographs of the area and showed them to the Yosemite staff. They readily admitted using the graveyard and telling tourists that bears marked for extinction were just being tranquilized and moved into the back country. Park policy. An easy way not to upset visitors unnecessarily.

Concerned about treatment of black bears in other areas, I wrote many letters. Stephen Herrero, a Calgary biologist who hosted the 1970 conference, sent the following information:

"Welcome to the bear business! Shocking detective work you've been up to in Yosemite, but has to take a back seat to good old Alberta, where local fish-and-wildlife types killed off over 500 black bears in the Peace River district this summer."

Why? Because the natural food industry has created a growing demand for honey. Large numbers of beekeepers do not have electric fences to keep bears away. Instead, they call their predator-control man.

Frank Craighead provided the following information: "It is almost impossible to see a black bear in Yellowstone, and I'm convinced this is largely due to the fact that bears have been eliminated. There is considerable circumstantial evidence but I have



not had the time or opportunity to pursue this further. I do know that not many years ago it was easy to drive through Yellowstone in a single day and see 40 black bears. A friend of mine who goes daily to Yellowstone to deliver papers saw only four different bears in the entire 1973 season. I've talked with numerous visitors who've spent as much as a week in Yellowstone unsuccessfully looking for black bears . . . one of the main visitor attractions in Yellowstone."

I do not wish to leave the reader with the impression that the National Park Service is an organization unified toward the destruction of wildlife. Both the Park Service and the science of wildlife management have come a long way since the 1920's, when a park superintendent wrote my mother a letter thanking her for reporting a bear that killed two fawns. The superintendent wrote that once the bear had tasted blood it could no longer be trusted around humans and should be destroyed.

Like our armed forces, the Park Service is a powerful bureaucracy with strong resistance to change from its lower ranks and the outside. It is composed of many good people, some stupid ones, and a healthy smattering of genuine brilliance. As one ranger so aptly stated, "It eats money—and on occasion, souls. Like us, it exists on the wrong side of Eden's Wall; it is, in short, less than perfect."

The National Park Service is in a difficult position. Established by Congress in 1916, the agency was directed toward mutually exclusive goals. It was given the charge not only to protect resources "unimpaired for future generations," but also to "provide for the enjoyment" of visitors. In the agency's early days, resources seemed infinite and visitors few. In recent years, the tables have turned.

In response to public pressure, the Yosemite staff drafted a "Bear Management Plan for Yosemite National Park" in November, 1973. The same mutually exclusive goals appear, this time stated in terms of bears. The three basic management objectives are:

1. To maintain populations of black bears at levels that are sustainable under natural conditions as part of the native fauna of the park.
2. To plan the development and use of the park so as to prevent conflicts and unpleasant or dangerous incidents with bears.
3. To encourage bears to lead their natural lives with minimum interference by humans."

Other sections of the policy delineate responsibilities, implementation, identification of problem bears, control of problem bears, and background information. The policy is filled with fragile concepts. Like our Bill of Rights, the outcome will depend largely on interpretation by those in power. Many aspects of bear management appear to be improving. Extensive bear research in Yosemite has not been possible in the past because funds were not available. Today, negotiations are under way between the Park Service and the University of California for just such research, although many people fear that the priorities of the energy crisis may divert badly needed environmental funds. The black bear is neither endangered nor economically useful. We can only hope that coordinated research is finally on its way.

At the time of this writing, rangers are actively working on closures for garbage dumpsters that are bearproof yet not visitorproof. They are optimistic about one design that has fooled bears for several weeks, yet is simple enough for the average tourist. In the past, bears have shown amazing facility for opening some rather sophisticated closures as well as the usual car doors and wing windows. Mother bears have regularly been observed sending small cubs into car windows and other small places to bring home the groceries.

Another strong point of the new policy is that concurrence of the Resources Management Division is required for relocating or dispatching any bear. This is a fragile area of personal interpretation. One wildlife manager may place emphasis on



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preserving resources unimpaired for future generations. His successor may emphasize preserving future generations unimpaired by bears. Enforcement of visitor regulations concerning bears is badly needed. Official fact sheets show that not a single written warning or citation was issued for a violation concerning bears to any of Yosemite's 2.3 million visitors in 1973. Enforcement must parallel any meaningful visitor-education program. Rules by themselves are of little avail unless they are enforced against the offending party. In situations involving humans and bears, rangers have found it more convenient to pick on the bears. No one has to advise them of their rights or worry about due process of law.

*Galen Rowell recently edited The Vertical World of Yosemite, and is now working on a Sierra Club mountaineering handbook, scheduled for release in 1975.*

**Alaska Lands (Continued)**

the waterfowl areas, the service has expressed a desire to play around with the boreal forests of the Yukon-Porcupine, as well as with those farther west along the Kuskokwim River.

Yet as Morton noted in his cover letter to Congress, he made his original study withdrawals solely for park and refuge purposes. In his talks with conservationists during the two-year study period, Morton repeatedly assured us that with a multiple-use agency (the Bureau of Land Management) in his own Interior Department, there was no justification for giving any of the study withdrawals not found to qualify for Interior's three systems to the Forest Service. Either Morton changed his mind, which is unlikely, or his superiors in the Nixon administration changed it for him.

Nevertheless, Secretary Morton's overall package of proposals can serve as a starting point for future negotiation. Some, such as the Noatak, the north addition to McKinley National Park, the Yukon-Charley National Rivers, and others are surprisingly good. It will now be up to conservationists to convince Congress to improve the package, including the deletion of some of the proposed national forests. This effort will be made more difficult by the energy situation, which is already being used by the Alaska politicians quoted above as justification for doing away with the three systems proposals altogether, in favor of extraction of whatever mineral resources may be present. Since these lands contain wilderness and wildlife values of global significance, the forthcoming congressional battle shapes up as one of the most important in the history of public land in America.

*Jack Hession*



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