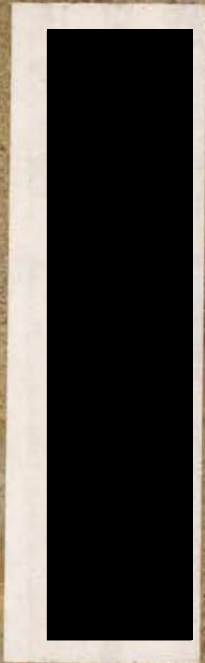


Sierra Club Bulletin



September 1973

The Lands
No One Knows



Valley of the Lyell Fork of the Merced River. Number VIII of a series by Ansel Adams. For information on how to obtain reprints see your Wolverine dealer.

America is within walking distance.

It was in 1883 that we opened our first tannery on the banks of the Rogue River in Rockford, Michigan. But it really wasn't our year.

1883 was the year of the railroad. The Northern Pacific made it to Seattle. The Southern Pacific made it to San Francisco. And so did the Atcheson, Topeka and the Santa Fe.

It was a golden age that opened up the country and revealed some glorious possibilities. Industrial America had begun.

Today, a lot of us are wondering what America was like before this

whole industrial thing began. What ever happened to rural America, the original one?

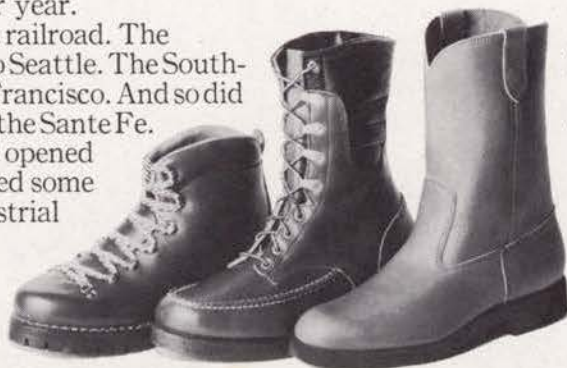
It's still out there, but you can't see it from trains, or buses or cars or planes. You have to walk it to really experience it.

A lot of us are doing just that. Re-discovering a heritage. On foot.

1883 wasn't our biggest year.

But 1973 may well be.

Because we still make boots for walking.



Wolverine® Boots



Sierra Club Bulletin

SEPTEMBER 1973 / VOLUME 58 / NUMBER 8

Contents

The Lands No One Knows	4	Charles S. Watson, Jr.
On the Reef in Hawaii	10	Cindy Winegar
Forests of the Future	11	Louise B. Young
Tall Grass Prairie National Park	25	Joe Skubitz

COMMENTARY

Get Polluted 4 Ways	15	A Staff Report
Oily Politics: The Canadian Capers	17	Brock Evans
Capitol News	17	
An Ethic of Care	18	Michael McCloskey
News View	20	
"A Brittle Understanding"	22	Patricia Rambach

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Cover: Water-tumbled pebbles in a desert wash . . . Philip Hyde found this hidden treasure in Marble Gorge and recorded it for the 1974 Sierra Club calendar.

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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The Centennial Range, in the Dillon BLM District, Montana.

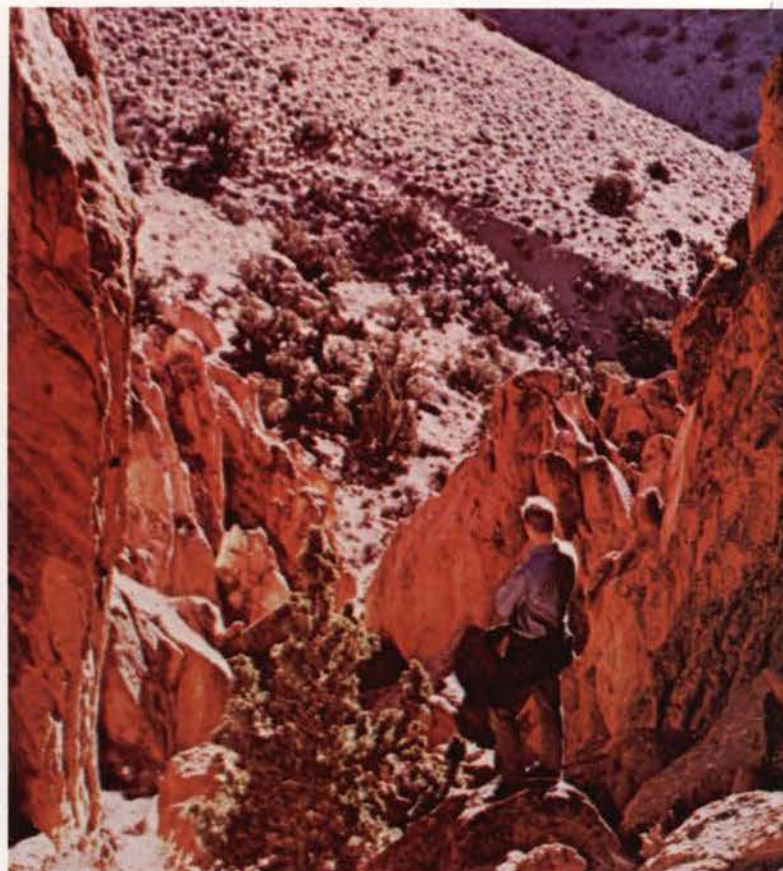


The rare ocelot still roams BLM lands in southeast Arizona.

Virgin grassland in the upper reaches of High Rock Canyon, Nevada.



Incandescent Rocks in the Virginia Range, near Pyramid Lake, Nevada.



THE LANDS NO ONE KNOWS

CHARLES S. WATSON, JR.

EVEN THOUGH the Bureau of Land Management (BLM) administers more than 450 million acres of public land—one-sixth of the total area of the United States and more than all other federal agencies combined—it has always been something of a poor relation to the National Park Service and Forest Service. Its lands typically have been regarded as undesirable leftovers, and its traditional mission has been to dispose of them by the most expeditious methods available. The BLM inherited this role from its predecessor, the General Land Office, which gave away public lands from 1812 until the establishment of the BLM in 1946. Together, these two conduits of public largesse managed to dispose of an estimated 1.5 billion acres of the public domain. Until fairly recently, no one really questioned the BLM's lemming-like urge for self-liquidation. BLM lands, after all, were considered by most people to consist of little else than godforsaken wastelands, bleak alkali flats, smelly sumps, and monotonous stretches of sand and sagebrush. As a result of this stereotype, BLM lands have languished in the backwater of public concern, receiving little of the solicitous attention that has saved so much of our finest national park and forest lands. Given this misapprehension of BLM lands, it was hardly surprising that the agency was not required to inventory its lands under the provisions of the Wilderness Act of 1964.

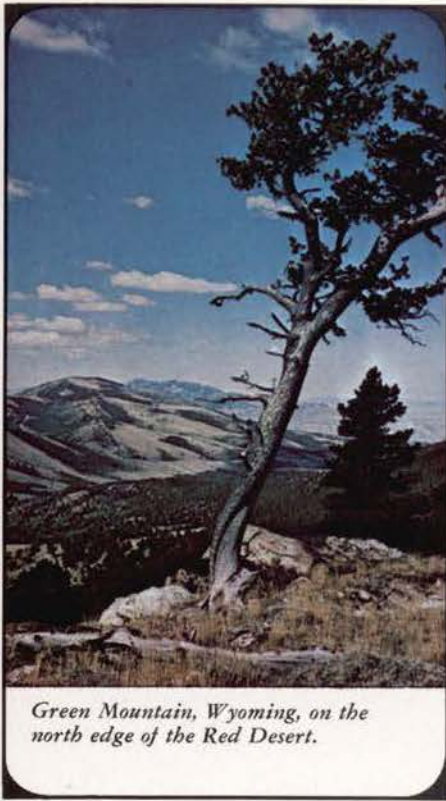
For years, the BLM has been understaffed, underfunded, and left to flounder in a morass of obsolete and inappropriate laws, and since 1970, it has even had to operate without the guidance of a basic statutory charter to articulate its mission and define its authority. With any luck, Congress will correct this situation this year. Last January, Senator Henry Jackson (D-Washington) and others introduced S.424, the National Resource Lands Management Act of 1973, in the Senate. A companion bill (HR 5441) has been introduced in the House by Representative John Saylor (R-Pennsylvania). Such legislation would finally provide the BLM with a coherent mandate based on principles other than disposal. Like all legislation, this too has its flaws, but at least it seems to recognize the value of BLM lands and the importance of providing the bureau with the means to administer them effectively for the public good and in accordance with contemporary environmental concerns.

The success of current efforts to refine the national attitude toward BLM lands depends on nothing so much as educating legislators,



Grosvenor Arch, Kane County, Utah, discovered in the late 1940's by a National Geographic expedition.

Longtime Sierra Club member Charles S. Watson, Jr. probably knows more about the treasures of the public domain than anyone else. He helped to found the Nevada Outdoor Recreation Survey in 1958.



Green Mountain, Wyoming, on the north edge of the Red Desert.

conservationists, and the general public to the immense value of these lands in terms of wilderness, wildlife preservation, scientific and historical interest, scenery, and recreational potential. BLM lands include many areas that would be worthy additions to our wilderness, park, or wildlife refuge systems. Lush garden islands off the coast of Florida, alpine lakes perched atop desert mountain ranges, an enormous unknown cave in eastern Nevada, an untouched stretch of forested California coast—such natural treasures are typical of what BLM lands contain, of what we have until recently ignored.

The first systematic attempt to catalogue the vast resources and natural features existing on BLM lands began in Nevada in 1958 when I helped to found the Nevada Public Domain Survey, later known as the Nevada Outdoor Recreation Association (NORA), perhaps the first environmental organization devoted exclusively to the problems and potentials of the BLM. We were dedicated to stopping the environmental degradation of BLM lands and were convinced that such reform should originate from within the agency itself. Recognizing the general state of ignorance that existed both within and without the BLM with respect to the public domain, we be-

gan our monumental *Nevada Outdoor Recreation Resources Index and Survey*, a meticulous compilation of data, reports, photographs, maps, and other pertinent information. Most of the natural features uncovered by this survey constituted genuine discoveries of previously unknown caves, canyonlands, native fish streams, glacial lakes, ancient bristlecone pine forests, virgin prairies and grasslands, rare and endangered wildlife, unusual flora, primitive artifacts and petroglyphs, historic trails, old ghost towns, and vast tracts of distinctive and often sublimely beautiful de facto wilderness—all this in a state popularly regarded as little more than a vast arid wasteland. Nevada was an ideal place to begin our survey because it is second only to Alaska in the amount of BLM lands within its borders. Its 48.3 million acres of BLM public lands make up 69 percent of the state, and together comprise an area roughly the size of Nebraska.

North-central Nevada's remote and seemingly forbidding Black Rock Desert is an excellent example of the misconceptions the public at large has of BLM public lands. Indeed, from afar this desert does seem little more than a bleak, sun-baked alkali flat where "even the jackrabbits have to carry canteens." Yet closer investigation of this area (dating from 1960 to 1965) revealed it to be an Ice Age wonderland of glacial alpine lakes, colorful geothermal springs, mysterious ghost towns, and sublime canyons with perennial streams containing native fish. Blue Lake, an alpine gem situated in the Pine Forest Range on the northern edge of this desert, is now being considered by the BLM's Winnemucca District as Nevada's first public land primitive area. Blue Lake is typical of the strange natural wonders on BLM public lands—set in its own glacial cirque and dammed by a terminal moraine, it is surrounded by high cliffs cloaked in virgin forests of mountain mahogany, limber pine, and a rare stand of whitebark pine. At an elevation of near 8,000 feet, Blue Lake is surrounded by lush meadows on a mountaintop Shangri-La, which drops off precipitously nearly 4,000 feet to the desert expanse below.

Until recently, wilderness was a dirty word in Nevada and still is, in terms of a 1961 resolution of the Nevada State Senate (SJR 6, 1961), which "memorialized Congress and the Fed-

eral government not to establish wilderness and primitive areas in Nevada." This statute is still on the books and is considered binding on all phases of state land-use planning. Even so, the Nevada BLM State Office and its seven district offices are beginning to show signs of moving toward the establishment of BLM primitive areas. The key area in this crucial effort is Blue Lake, which now enjoys high priority status in the Winnemucca BLM's Management Framework Planning process. Once the BLM acts on Blue Lake, action on other areas should follow. Nevertheless, powerful elements of the Nevada political establishment—allied with militant ORV groups and the Nevada Miners and Prospectors Association—will do their utmost to prevent BLM public-land programs in Nevada. Even now, they are pushing legislation in the Congress that would give the states authority to obtain any BLM lands, even those withdrawn by the BLM for its own programs. In Nevada, anti-wilderness factions have made no secret of their intentions to use such legislation as a vehicle for transferring to the state public lands considered to be prime wilderness candidates.

The *Nevada Outdoor Recreation Resources Survey and Index* has amassed



Balanced Rock, one of the unusual formations in the Owyhee Desert.



River otters sporting in a stream not far from Tucson.

a total of 89 prime wilderness regions, natural areas, and areas significant in both respects, which we called "complexes." One such "complex" is Red Rock Canyon, located within 15 minutes of the Las Vegas strip in Clark County's rugged Spring Mountains. This system of deep recessed canyons walled by towering, colorful sandstone cliffs contains rare flora, unusual rock formations, endangered wildlife, virgin forests, Indian petroglyphs and pictographs, and ancient ceremonial mescal pits. High Rock Canyon in northern Washington County is equally impressive. Here we found five spectacular, deeply incised, vertical-walled canyons, one of which contained rare carved and axle-grease inscriptions dating from the summer of 1852. These man-marks were made by pioneers following the little-known Applegate Trail, which ran through this country. Aside from its scenic and historic interest, High Rock Canyon is also one of a handful of areas in the entire Great Basin that still has remnants of the native tall-grass prairie (mainly consisting of Great Basin wild rye and Idaho fescue) known to be widespread in Nevada basins in primeval times.

Of all the natural wonders we uncovered in Nevada, Leviathan Cave, a majestic cavern we prefer to list anonymously as existing "somewhere in eastern Nevada," is perhaps the most amazing. This cave has dimensions said to exceed even the famed Carlsbad, Mammoth and Fingal's caves. Its entrance measures 100 by 180 feet, with an interior room measuring 300 by 700 feet. Outside, the remote mountain crags surrounding the cave contain a forest of ancient bristlecone pines. Alvin McLane of

Reno, a renowned speleologist and member of NORA's executive board, first began to hear of a "picture-window" cave possibly as early as 1959 and subsequently told me of the rumors. At that time I was assigned to the Nevada BLM's cartographic section, compiling public land administrative unit maps, and I managed to be assigned primary responsibility for the vicinity where the cave was reported. This allowed me to analyze aerial photographs of the area, whereupon in 1961, I spotted what first appeared to be "flaws" in two of the photos. Viewing them stereographically revealed they were not flaws at all, but a huge hole in the mountainside. By early 1962, the map compilation was complete, the cave's location meticulously pinpointed, and its approaches delineated. This map enabled McLane to lead three expeditions to Leviathan Cave during which he mapped and photographed its interior. Together, McLane and I prepared a NORA field study report and turned it over to the Nevada State Director in 1963. However, it took seven years to realize the creation of a 3,400-acre Leviathan Cave Natural Area.

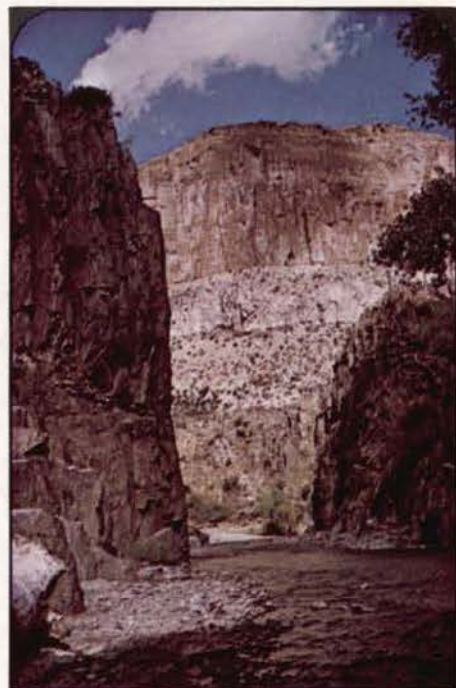
Eastern Nevada, in general, is a land whose alpine heights abound with wonders. Aside from being one of America's richest cave regions, it also contains at least 12 forests of ancient bristlecone pines, the world's oldest living trees. They are so ancient here (some are suspected to exceed 7,600 years in age) that biologists have changed the species name of the Great Basin bristlecone pines, from *Pinus aristata* to *Pinus longaeva*.

The two most significant bristlecone pine forests located on public



A rare black-footed ferret spotted ten years ago in South Dakota.

lands are found on Morey Peak in northern Nye County and on the Schellcreek Range in White Pine and Lincoln counties. The Morey Peak forest was first described by none other than John Muir in the 1870's and is the only known forest in Nevada growing on volcanic rock. Morey Peak itself is the remnant of an ancient caldera—similar in structure to



Aravaipa Canyon, Arizona, designated a BLM primitive area by order of Stewart Udall in January, 1969.

Oregon's Crater Lake—which collapsed in prehistoric times. Out of it, NORA discovered three permanent, desert-bound waterfalls and some of the most intricate Anasazi-type petroglyphs known anywhere.

The Schellcreek Range forests (there are more than one) were not revealed to us until 1966, when an old Pioche prospector named James Hulse, Sr., escorted us to them. A 15,000-acre tract in one of these forests, highlighted by Mt. Patterson's mammoth shaft of limestone (the "Rock of Ages"), was set aside by the BLM in 1970 as a "botanical natural area." In the "Rock of Ages" limestone pillar, we found several bristlecones growing out of cracks in its perpendicular sides and a spectacular natural arch in a hidden crevice on its south side. Today, the Schellcreek Range is one of

27 areas in the *Survey and Index* that have been set aside by the BLM since 1969. Yet, Nevada's first designated primitive area still languishes in the seemingly interminable labyrinth of the BLM's "Management Framework Planning" schedule.

In 1966, when NORA established the National Public Lands Task Force in order to extend its activities to other states, we found the same condition of public and bureaucratic ignorance with respect to BLM lands that had characterized Nevada. Everywhere there was beauty that no one knew about. In Florida, for example, recent U.S. Coast Guard programs to revise nautical charts revealed several offshore and estuary islands to be BLM lands. Most of these islands are virtually untouched and provide essential habitat for several rare and endangered species. The treasure hunt on BLM lands in other states has proved equally rewarding.

In Washington, the future of 300,000 acres of BLM lands remains uncertain because they were not classified while the Classification and Multiple-use Act was in effect (1965-1970). This failure means that some lands, such as one area in south-central Washington that contains one of the northernmost stands of western juniper, may be lost. Nevertheless, the movement to designate certain BLM lands for protection has begun in



Time and marks of man: a pioneer's inscription in High Rock Canyon, Nevada, reads "Geo. N. Jaquith, July the 16th, 1852, from Wisc." At the right, the Hot Creek petroglyphs, near Moore's Station, Nye County, Nevada.

Washington, a development that may finally preserve such areas as the 5,000-acre Chopaka Mountain tract in the Okanogan region, which contains virgin forests, a fiord-like lake, and a sheer 5,000-foot mountain face. Cooperation between conservationists and the BLM has advanced further in Oregon than in Washington. The BLM's Burns district has already begun to integrate lands in the Steens Range—with its glacial U-shaped gorges and extensive wildlife—with a Desert Trail movement headed by Russell Pengelly of Burns, Oregon. On the coast, the BLM's Coos Bay District has discovered a remarkable Jurassic-Age peat formation lying on tidal flats near New River. The Roseville BLM District has preserved a remarkable rain forest area near Glide, in the Cascade Foothills, known as the Wolf Creek Trail.

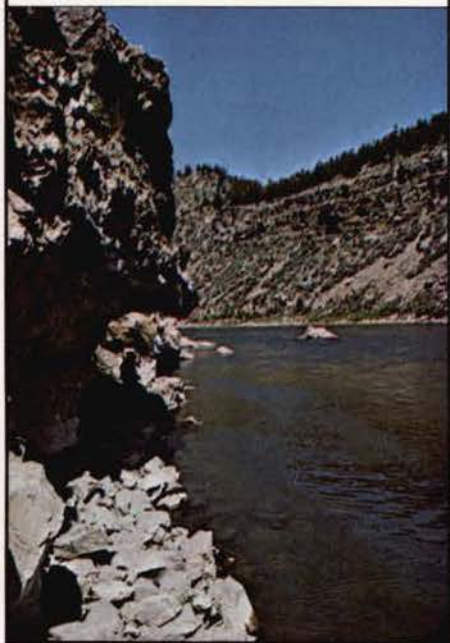
In California, the pending Mojave Desert National Conservation Area has been well publicized. Here, the Riverside BLM District, for the first time, has been authorized to hire rangers to patrol such wild desert regions as the Chuckawallas, Turtle Mountains (with the northernmost native fan palms), Whipple Mountains (only known gardens of saguaro cactus in California), Dumont Dunes and Tecopa Bore (desert cyprinodon pupfish and unique dune flora), Fort Piute (unique petroglyphs and desert springs), Rodman Mountains (only known Anasazi mathematical tables and ceremonial kivas), Cima Dome (among the largest known Joshua tree forests), and the painted canyons of the Yuma Desert, Mecca Hills, and Grapevine Canyon. So far, 19 major

areas totaling 2.7 million acres have been designated, and there is an effort under way to include in this desert conservation area much of the BLM lands east of the Sierra Nevada.

Other California BLM lands include the McCain Valley tract in San Diego County, which includes the rugged In-Ko-Pah Mountains and portions of the Anza-Borrego Desert, and the Otay Mountain tract, a wildland only 20 miles from San Diego. In central California along the Sierra Nevada foothills there are extensive BLM public lands, featuring wild-river sections of the San Joaquin and Yuba rivers. In the Coast Range (from San Luis Obispo County to Humboldt County) the BLM administers more land than the Forest Service. The one area in this region where the California BLM seems to be advancing is in the King Range, in southern Humboldt County. Here, the BLM controls nearly nine miles of remote and so-far undeveloped northern California coastline and has special authority under an Act of Congress to purchase private lands sought by land speculators. We hope the BLM will maintain the immediate coastline in its present wilderness state. Although the King Range tract lacks redwoods (an ecological, not man-caused, phenomenon), it still contains extensive virgin forests and is said to be more pristine in its general character than the Point Reyes National Seashore.

Arizona's BLM lands are largely restricted to the Sonoran Desert in the south, the Lower Colorado River region, and the Arizona Strip country north of the Grand Canyon. In cooperation with Arizona conservation-

Hauser Narrows of the Missouri River, near Gates of the Mountains.



ists, we have identified 21 prime de facto wilderness areas on the state's BLM lands, 14 of which have even been recognized by the BLM state office in Phoenix, though no formal action to set these lands aside has yet been taken. Arizona also contains the first BLM public lands primitive areas—Aravaipa and Paria canyons—established in January 1969 in the eleventh hour of the Johnson Administration by outgoing Secretary of the Interior Stuart Udall. Among the 21 identified areas deserving similar designation is Burro Creek Canyon, a botanically unique area in that here the saguaro of the Sonoran Desert and the Joshua tree of the Mojave exist side by side. Another prime area, the Bill Williams Mountains, contains remnant herds of the desert bighorn sheep and Mexican pronghorn antelope. Other areas include the Gila Mountains, Sullivan Canyon, the Black Mountains, and the Boboquivari Peak area.

Some of the most spectacular scenery to be found on BLM lands occurs in Utah, whose 22.7 million acres of BLM lands include some 40 wilderness area candidates. This rugged, colorful state also contains some of the most important archaeological artifacts to be found anywhere on BLM lands—more than 2,000 ancient Anasazi and Moki pueblo ruins and cliff dwellings. Long considered by many to be the greatest wilderness left in the contiguous United States, Utah's Can-

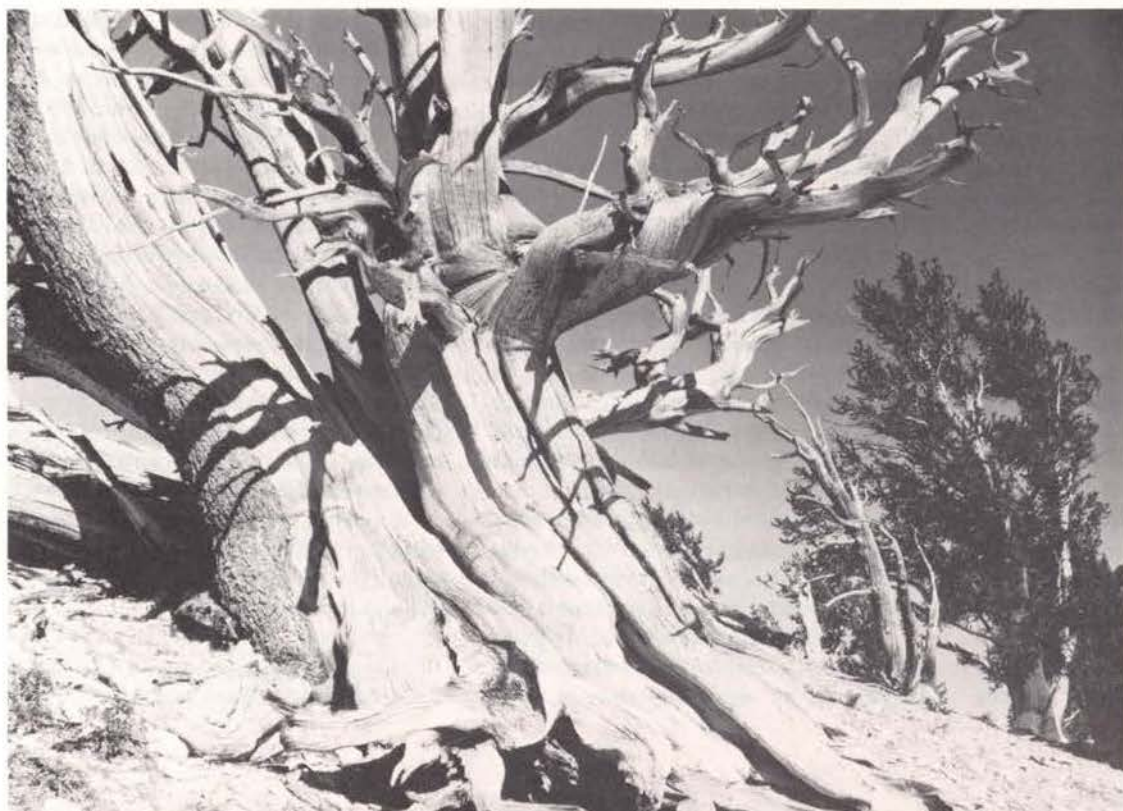
yonlands are still little explored, and many of their attractions still await discovery. Like those of Nevada and Alaska, Utah's public lands offer a classic adventure experience for desert and canyon explorers, wild river enthusiasts, and seekers of wilderness solitude. The Waterpocket Fold country (part of which was incorporated into Capitol Reef National Park in 1969) and the Henry Mountains provide an almost complete representation of Utah's varied life zones. Ranging from upper Sonoran Desert to Hudsonian habitats, this country encompasses an elevation change of almost 8,000 feet—from 3,700 feet to 11,615 feet (Mt. Ellen, in the Henries). Time and the elements have sculpted the Henries into a fantastic array of strange colorful formations. These mountains are also noted as one of the few areas still possessing a genuine herd of wild bison.

East of the Colorado River, the BLM's Monticello District, which includes Utah's famed "Four Corners" region, has designated natural areas at mysterious Dark Canyon, as well as pending actions at Moki Canyon, Grand Gulch (to be upgraded to primitive area status), and Cedar Canyon. West of the Colorado River, the Escalante Canyons and the northern extension of Paria Canyon have been added to the BLM's primitive area system. In north-central Utah, the BLM's Price District has been contemplating

still further actions for the rugged canyons of the Green River, including sublime Desolation Canyon. Farther west, in the Great Basin, there is growing concern for such areas as the Sevier Desert, Little Sahara, San Francisco Mountains, and the Great Salt Lake Desert.

Idaho contains two outstanding BLM regions—the Owyhee Desert and the Great Snake River Plain. The grandeur and historical significance of the six-million-acre Owyhee Desert are unrivaled. It is a region of deep, vertical-walled canyons, strange balanced rocks, huge sand dunes, and geothermal springs. It contains petroglyphs and well-preserved remnants of the Oregon Trail. A century later the old wheel grooves of wagon trains remain intact, providing an object lesson in today's off-road vehicle crisis. The Snake River Plain provides one of America's great showplaces of the most bizarre effects of volcanism. The region is a huge morass of ragged, jumbled, and smooth lava flows, fumaroles, craters, cinder cones, lava tubes, underground rivers, springs, and natural arches. The 1.5 million-acre Snake River Plain is one of the largest and wildest landscapes in the Pacific Northwest. Northern Idaho has only a few scattered tracts, but those along Coeur d'Alene Lake (including the Mineral Ridge Scenic Area) and the

Continued on page 29



The Great Basin bristlecone pine (Pinus longaeva) abounds on BLM lands in eastern Nevada. Some are believed to be more than 7,600 years old.

On the Reef in Hawaii

Airport Extension for What?

CINDY WINEGAR

HAWAII, THE NEWEST of states, has now come of age environmentally and adopted the primary tool of mainland environmentalists, the NEPA-based lawsuit. The Hawaii Chapter of the Sierra Club joined with Life of the Land (a local environmental action group deriving its name from Hawaii's state motto), the Hawaii Audubon Society, Friends of the Earth, and four Honolulu residents living in the environs of the Honolulu International Airport in challenging the adequacy of the FAA's environmental impact statement (EIS) on the proposed Reef Runway addition to the airport. The Reef Runway, long touted by the state Department of Transportation and the local cement lobby, is the first offshore runway on reef lands anywhere in the world. Other locales, such as Chicago, with its Lake Michigan proposal, have discarded plans for runways surrounded by water.

At first glance the Reef Runway has a seductive appeal. A parallel runway more than a mile from the present one would seem to assure noise reduction and some improvement in safety. Beleaguered residential areas, which are continually afflicted with aircraft noise and the possibility of an aviation disaster, might find much-deserved relief. But a detailed examination of the environmental impact statement for the project and other documents related

to the Reef Runway reveals a different and disturbing story.

The Reef Runway addition to the airport was expressly designed, according to the EIS, to increase the capacity of the airport in addition to allegedly reducing noise levels and increasing safety. Indeed, on page one of the impact statement the projected Honolulu tourist level for 1990 is cited as more than eleven million visitors. Anyone who lives in or has visited the fiftieth state recently knows that Hawaii is undergoing severe social and environmental strains with the present two million tourists a year. The airlines are not in favor of the Reef Runway because they feel they have sufficient capacity at the Honolulu Airport to last until at least 1980. Figures from the Civil Aeronautics Board support their contentions. To the surprise of many, Hawaii has been a losing route since the number of carriers was dramatically increased from the original three airlines that serviced the islands.

The capacity "need" cited by the EIS also points up a fundamental flaw in the salesmanship used by the governmental authorities. Both runways are to be utilized, so that as the passenger total exceeds the capacity of the existing wide-body fleet of aircraft, the number of operations will rise. It does not take a visionary to realize that according to the state's visitor projections both the Reef and the present runways will be used heavily, thus negating any significant decrease in noise, and probably intensifying safety and air pollution problems. Furthermore, at this late date no one knows (or is telling) exactly which aircraft will use which runway.

The Reef Runway lawsuit was filed in November of 1972 by two Honolulu lawyers, Michael Sherwood and Brook Hart. Judge Samuel King of the District Court of Hawaii heard trial testimony for nearly one week in mid-December. Expert witnesses were called by the plaintiffs to testify on such diverse topics as airport environmental impact statements, demographic impacts, air pollution, water quality, and wildlife habitat. At issue was the integrity of the 43-page EIS, especially the pages devoted to a discussion of alternatives. Plaintiffs argued that numerous important alternatives, including the shifting of general aviation to a separate field, diverting the noisiest aircraft (the

U.S. Air Force's KC-135 tankers) to existing military airports on Oahu, and compelling Hawaiian and Aloha Airlines DC-9s and 737s to utilize the full runway, were not even mentioned. The few alternatives cited by the defendants (the FAA, the U.S. Department of Transportation, and the state Department of Transportation) were given short shrift.

Apart from the environmentalists' reliance on another statute, the Airport and Airways Development Act, the crucial issue concerned the preparation of the environmental impact statement. The Federal Aviation Administration improperly farmed the EIS out to the state, which then improperly gave it to the Ralph M. Parsons Company, an engineering firm. At the time that Parsons prepared the EIS, the firm held a state contract to serve as consultant to the Honolulu International Airport. One of the specific duties set forth in the contract was to oversee the construction of the Reef Runway. Thus, Parsons both had and has a direct financial interest in the Reef Runway project, potentially the largest contract ever let by the state. No other environmental case has raised this sort of financial conflict of interest.

In a seven-page opinion issued just before Christmas, Judge King found against the Sierra Club and the other plaintiffs. Interestingly, no mention of any case law was made in the text of his opinion. The decision described the errors in the impact statement as errors of draftsmanship. Plaintiffs meanwhile had cited the lack of noise, air pollution, or demographic studies, and the failure to note in the EIS one of two major noise studies which concluded that the Reef Runway would not significantly reduce noise. The judge also ruled that the National Environmental Policy Act does not prevent the employment of a private contractor with a financial stake in the project from preparing the EIS.

The Reef Runway case is on appeal to the Ninth Circuit Court of Appeals in San Francisco, where an injunction pending appeal was granted in June of this year. The full appeal took place on August 7, 1973, before a new panel of judges. The case has been taken under advisement and an opinion should issue shortly.

Cindy Winegar has been active in Sierra Club affairs in Hawaii.

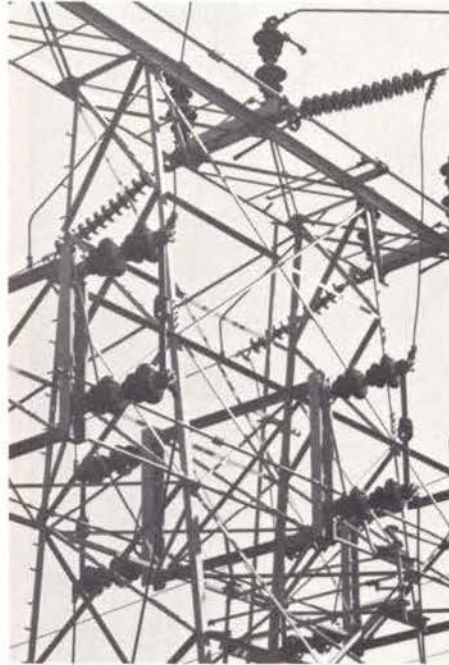
Forests of the Future

LOUISE B. YOUNG

IT IS CONSERVATIVELY estimated that in the next ten years one hundred thousand miles of new transmission lines will be built in the United States—a hundred thousand miles of heavy metal conductors and 12-story-high skeletons whose stark shapes will be silhouetted against forested mountainsides and fertile farmlands. Each mile of right-of-way passing through a densely wooded area requires the sacrifice of about ten thousand trees, leaves a wide slash of destruction that is perpetuated with powerful brush-killers, and provides a broad avenue for erosion. A hundred thousand miles of right-of-way is comparable to crisscrossing back and forth 30 times from coast to coast. In the 1980's another hundred thousand miles will be constructed and in the 1990's another. . . . Slowly but inexorably, these harsh steel structures are replacing the delicately interwoven pattern of the living forests. And, like giant robots reproducing themselves, they are creating the forests of the future.

Even now, these ugly structures have become so commonplace that it is hard to find a broad vista that is completely free of them. "You'll get used to them," say the power company executives; "Pretty soon you won't even notice them anymore." And the really frightening thing is that this is true. The ability to look without seeing is part of the adaptation we are all making to a rapidly deteriorating environment. We look *around* billboards and *over* superhighways and *under* transmission lines, and pretty soon we don't really see at all anymore.

Landscape photographers recognize more clearly than most people what is happening to our countryside. The lens of the camera (and, therefore, the eye of the photographer) sees a landscape exactly as it is, the simple un-



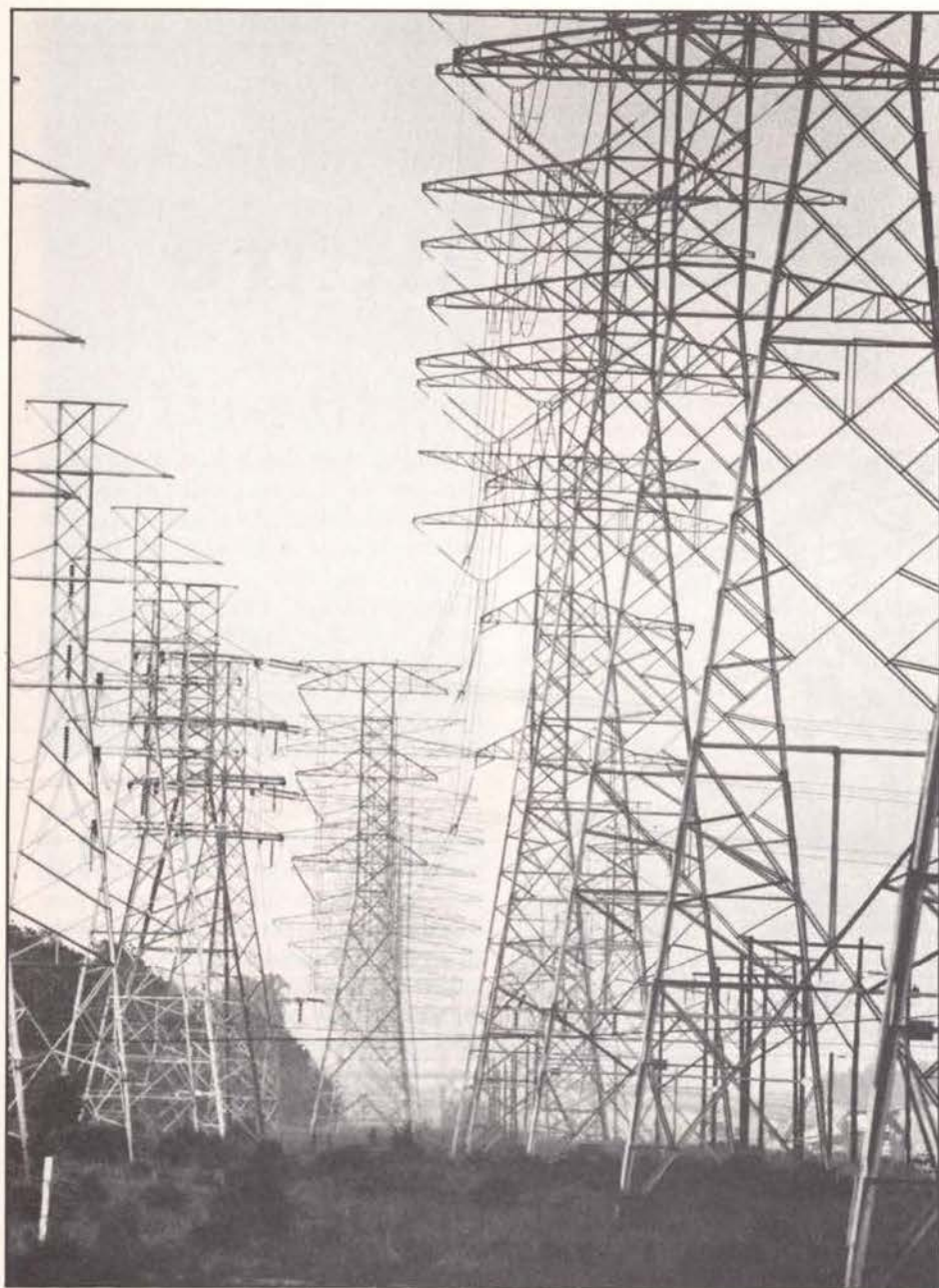
adulterated facts of reality. A little child sees this way, too. But the sophisticated human mind has the ability to discount distracting factors, and this mental editing interferes with the single visual impact of beauty, the sensual impression of a thing whole and harmonious in all its parts.

By the turn of the century a network of transmission lines will have enmeshed our land in a vast spiderweb. Another generation growing up then will never see an uncluttered sweep of prairie land or the gentle curve of hill against a clean horizon. As René Dubos has observed, "Man is able to adapt to almost anything. That is the real tragedy. . . . As we become adapted we accept worse and worse conditions without realizing that a child born and raised in this environment has no chance of developing his total physical and mental potential."

The visual pollution of transmission lines is a very serious environmental

problem, but there are other less-known environmental problems caused by these lines, and these are becoming more serious as the electric utility companies go to higher and higher voltages. The big new lines, built to carry maximum power at minimum cost, create a number of "side effects" that are irritating and possibly dangerous to the thousands of people living near them.

Lines are being built today that carry 765,000 volts and are capable of transmitting enough electricity to provide the average needs of a city the size of Chicago. This enormous flow of electricity is carried on bare wires that pass overhead, in many places no more than 40 feet above roads and farms. It may come as a surprise to many people to hear that the lines that carry these great amounts of power are not insulated. In fact, no transmission lines are insulated in the way electric cords are in our homes. The theory is that air is a good insulator, and this is true—up to a certain critical voltage. But beyond this point any increase in voltage or any imperfections in the line cause the air to break down as an insulator, and electricity is discharged. The critical point at which this "corona discharge" occurs depends on several design characteristics such as the number of conductors and their diameter and spacing. In general, the greater the diameter of the conductors and the wider the spacing, the higher the voltage that can be carried without reaching the critical voltage. But larger, more complex lines are more expensive to build. As voltages have steadily risen, electric companies have been building lines that operate closer and closer to the critical voltage. The 765,000-volt lines operate so near the breakdown point that any scratches, soot, or grains of pollen on the wires cause a



discharge of electricity into the atmosphere.

In corona discharge, high-energy electrons leave the surface of the conductor, strike the molecules of air, and cause them to split into molecular fragments. The space surrounding the discharge becomes a seething cauldron of electrical and chemical activity. There are many processes involved, and some of the chemicals formed are considered to be particularly damaging to living things.

One of the most important reactions involves the element oxygen, whose molecule normally contains two atoms. When it is struck by a high-energy electron, formation of a special type

of oxygen molecule containing three atoms results. This new molecule, known as ozone, is now recognized to be one of the most toxic elements in our atmosphere. Polluted air often contains high levels of ozone, and research has revealed that exposure to concentrations of ozone as low as .05 parts per million by volume affects the growth, yield, and life expectancy of many plants. Ozone is known to be causing extensive damage to vegetation in this country, from the California citrus groves to the white pine forests in the eastern United States. Laboratory animals regularly exposed to low concentrations of ozone show lung-tissue damage similar to emphy-

sema and fibrosis. They also show increased incidence of sterility, neonatal death, and defective offspring. The scientists reporting these experiments suggest that these effects may be caused by alteration of the genetic constitution of the sperm by the ozone. Similar types of biological damage are thought to occur in humans when they are chronically exposed to ozone levels greater than .05 parts per million.

Other mutagenic and toxic chemicals such as hydrogen peroxide, hydroxyl radicals, and singlet oxygen are generated in the breakdown of air by electric discharge. Yet electric companies are building thousands of miles of lines that cause corona discharge without adequate scientific studies to evaluate the effect of these chemical reactions on the atmosphere along the rights-of-way where many people spend a large part of their lives.

One annoying phenomenon has long been associated with overhead transmission lines. When the air becomes a partial conductor, electromagnetic fields are set up that interfere with radio and television signals. For good reception in rural areas, where signal strengths are low, interference levels must also be kept low. In order to reduce the interference from transmission lines, heavier and more expensive construction is required. But the design criteria used by power company engineers are not adequate to assure rural residents acceptable radio and television reception, especially in bad weather. In effect, rural residents are being treated like second-class citizens as far as their right to be free from electronic interference is concerned.

The new 765,000-volt lines also produce a continuous humming and crackling sound which in rain or snow becomes a loud roar. Noise levels up to 70 decibels have been recorded. At this level it is necessary to shout to conduct normal conversation. Ninety decibels is the legal limit for noise levels regularly imposed upon people during working hours and beyond that level employees must be protected to prevent deterioration of their hearing. Many city dwellers are also protected against irritating noise levels. For instance, in Chicago a city ordinance forbids the installation of appliances that cause noise levels exceeding 55 decibels at the lot line in residential zones. But rural citizens have no such protection against

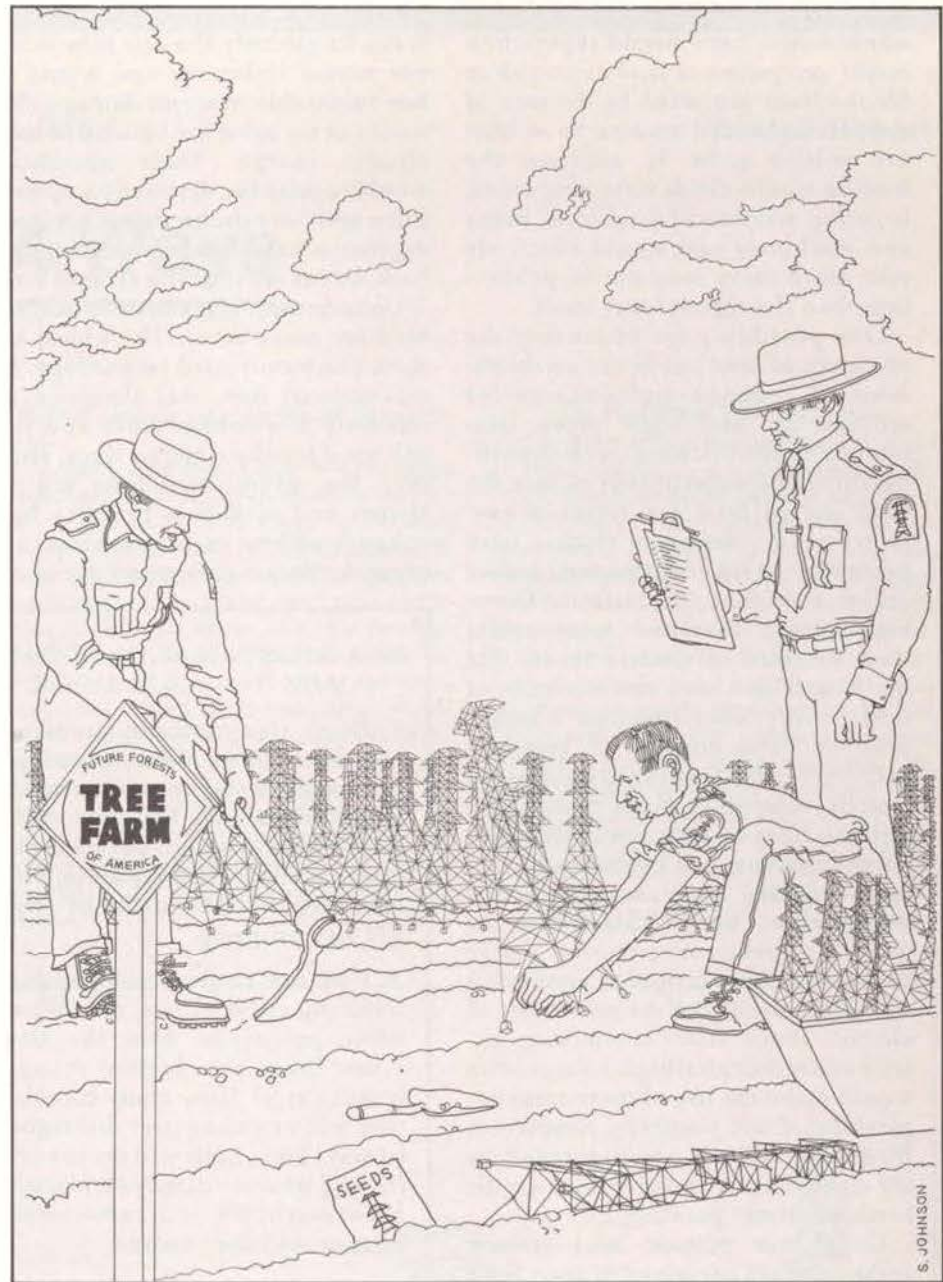
this invasion by the electric companies of their right to peaceful enjoyment of their homes and property.

One of the most unpleasant and hazardous features of life near these rights-of-way is the ever-present danger of electric shock from contact with metallic objects. A strong electric field exists between the transmission wires and the ground and when a conducting object such as an automobile or a piece of farm machinery comes into this field it takes on voltage. If the object is insulated from the ground (by rubber tires for example), a charge builds up. When a person touches the object, the accumulated voltage flows through him to ground. The larger the object and the closer it is to the line, the greater the voltage transmitted by the person. If the current is strong enough, one becomes physically unable to release the conducting object and current continues to flow through his body to the ground. The threshold of danger is determined by the amount of voltage a person can conduct and still be able to release the object using the muscles directly stimulated by the current.

Articles published by electrical engineers in professional journals show that it is theoretically possible for a person coming into contact with a long metal object such as a pipe, a fence, or a gutter under a 765,000-volt transmission line to experience currents exceeding an adult's safe let-go threshold. For a child the hazard is greater. These studies also show that shocks causing major physiological damage could result from contact with large vehicles parked under 500,000- and 765,000-volt lines. Yet utility companies do not warn property owners of such dangers. In fact, they claim that there is no hazard, that these shocks are "similar to touching a doorknob on a cold day."

The companies hope to avoid serious accident from these shocks by grounding all metallic objects in and near the right-of-way. But grounding wires can become corroded, damaged, or removed, and the presence of vehicles or machinery that do not normally belong on the property could create a hazard.

The problems created by the 765,000-volt lines are just the beginning—electric companies are planning to go to much higher voltages in the very near future. Development work is currently in progress on overhead trans-



mission lines that will carry 1,500,000 and even 2,000,000 volts. It must be emphasized, however, that it is not the high voltage in itself that is responsible for the most important "side effects" created by these lines, but the design of the lines themselves. Corona discharge could be reduced to a minimum by using larger and more numerous conductors, and danger of shock could be reduced by increasing the height of the lines.

Both these solutions, of course, require more expensive equipment which runs counter to the overriding objective of the electric companies—to produce and transmit power at the cheapest possible price. This cheap-

ness is achieved at the expense of the hundreds of thousands of people who will be living in the path of these big lines. It is achieved by unnecessary waste of electric power and by extravagant land use. If unchallenged, these policies will increasingly dissipate irreplaceable natural resources. For example, a power company executive, speaking at a symposium of international power engineers in Sweden in 1971, suggested that the problem of induced shock from ultra-high-voltage lines might be solved by purchasing and fencing the rights-of-way. "This solution," he said, "may be more economical for the power companies than increasing ground

clearances." Fencing rights-of-way for transmission lines would represent a major usurpation of land as corridors for the lines projected by the turn of the century would amount to at least five million acres. In addition, the fencing would divide farm properties, isolating sections of land from barns and machinery and would effectively take much more land out of production than the right-of-way itself.

One possibility for improving the efficiency of land use is the establishment of common rights-of-way for utilities: gas and water pipes, telephone and electric lines. Such consolidation would substantially reduce the total use of land for rights-of-way. However, the design of electric lines presently being constructed makes utility corridors impractical. Extra-high-voltage overhead lines create such a hazard of electric shock that the installation and maintenance of other utility lines becomes a major problem. The concept of common corridors is not feasible as long as the electric companies build their transmission lines in such a way that dangerous currents can be induced.

It has also been suggested that transmission line rights-of-way be used for public recreation: picnic parks, wildlife sanctuaries, equestrian or bicycle paths. But the possibility of electric shock from conducting objects under the extra-high-voltage lines would make the use of these areas unpleasant, if not positively dangerous. Birds and animals are frightened by the electric fields and give them a wide berth whenever possible.

Under our present laws electric companies are permitted to erect lines that make the land beneath them virtually unusable. The right of eminent domain gives them the power to condemn and fence off millions of acres just because this solution may be more economical than increasing the height of their lines. With the increased pressure on land resources and the increasing use of land for nonproductive purposes, a generation from now such rights-of-way, surrounded by high fences, sprayed with brush-killers, and posted with "Enter at Your Own Risk" signs, may be the principal hiking trails and recreation areas available in America.

It is obvious that the most effective way of reducing the environmental impact of power transmission would be to bury most of the lines. Under-

ground lines would not mar the landscape or electrify the air; they would not attract lightning and would be less vulnerable to storm damage. They would never cause the buildup of static electric charge. Their installation would require the destruction of fewer trees, and once the earth was replaced, vegetation could be allowed to grow back across most of the cleared strip.

Underground transmission has been used for many years. The oldest and most commonly used technology, the oil-insulated line, was designed for relatively low-voltage lines and it is still used for distribution lines. However, the oil-insulated lines are too clumsy and inefficient to carry high voltages without enormous losses and expense. Better techniques for trans-

mitting large quantities of power have been successfully used in a number of places around the world such as New Zealand, Scandinavia, England and France. But in the United States the very few high-voltage cables that have been installed underground utilize the inefficient old-fashioned method and are so wasteful that they have been used only for very short distances in highly populated areas. Again, the reason for this technological lag is to be found in the principle of maximum economy. Underground lines are more expensive and, although new designs offer promising price reductions and great improvements in efficiency, the companies have been loath to invest the time and money necessary to perfect them.

Lines insulated with special gases such as SF₆ (sulfur hexafluoride) are practical, and this technology is being used extensively abroad. Lines cooled to very low temperatures with liquid nitrogen or helium appear to offer maximum efficiency for high-voltage transmission. The engineers at General Electric and Union Carbide who have designed these lines believe that with proper funding these technologies could be made commercially feasible within a decade and that they would compete economically with overhead lines when large amounts of power are transmitted long distances.

Unfortunately, however, these development projects are not being sufficiently funded, while ultra-high-voltage transmission is being pushed very rapidly. Unless the American people unite to put enough pressure on electric utility companies to bury their lines, the investment in these monstrous overhead lines will have progressed so far that it will be impossible to arrest their march across our land. These giant steel skeletons will deface our countryside for our lifetime, perhaps for our children's and grandchildren's also. None of us would build a house or even a mobile home with all the plumbing lines and electric conduits strung out in full view and cutting diagonally across the living room. Of course it would be cheaper to do so, but we would rather pay a little more to create clean, uncluttered living spaces in our homes. We Americans are the richest people on earth. We can afford to preserve uncluttered beauty in our outdoor living spaces as well.

Continued on page 30

IF A RIGHT-OF-WAY AGENT COMES TO YOUR DOOR

1. Don't sign anything. In many instances, those who resist appropriations end up with as much as seven times the first offer. You *should* receive a high payment because the line will have an important effect on the quality of your life and property.
2. Find out as much information from the agent as you can. What other properties does the line cross? What is the highest voltage it will carry? How many conductors will be strung over this right-of-way? How high will the towers be, and where will they be placed? How much TV and radio interference will they cause?
3. Immediately following the agent's departure, call neighbors who will be involved and advise them not to sign, and suggest that they call their neighbors. Assemble the group as rapidly as possible, because a group has power that an individual lacks.
4. Find a lawyer knowledgeable in environmental law. This is not easy, as lawyers unacquainted with the field may claim that fighting right-of-way appropriations is hopeless. Yet in recent cases power companies have been required to justify the need for the line, consider alternate routes, and assess the environmental impact of each.

EPA Jeopardizes Clean Air

A Staff Report

Get Polluted 4 Ways

THE ENVIRONMENTAL PROTECTION AGENCY (EPA) will soon hold hearings in Washington, D.C., Atlanta, Dallas, Denver, and San Francisco on four alternative ways to "gray" rural America. These hearings are the latest chapter in the EPA's three-year-long history of violating the Clean Air Act of 1970. As directed by the act, the EPA in April, 1971, issued national standards calculated to upgrade urban air quality. A few months later, the EPA set guidelines for state implementation of those standards that would have resulted in the deterioration of air quality throughout vast rural and suburban regions of the country. The Sierra Club sued the EPA under the Clean Air Act for failing to protect areas whose air was as yet unpolluted. The U.S. District Court (May, 1972), the Court of Appeals (November, 1972), and finally the Supreme Court (June, 1973) each affirmed that the Clean Air Act prohibits the significant deterioration of air quality in any portion of any state.

The EPA's Solution

On July 16, 1973, in response to the Supreme Court decision, the EPA published in the Federal Register (38 FR 18986) four alternative plans for the "prevention of significant air quality deterioration." These alternatives—none of which meet the requirements of Congress, the courts, or clean air—are:

1. Air Quality Increment Plan: would set a national uniform limit to the amount of particulate matter and sulfur dioxide that could be emitted in a given area in excess of the 1972 levels for these pollutants. In other words, in any locality where the actual levels in 1972 were below federal standards, pollution levels could be increased only by a specified amount.

2. Emission Limitation Plan: would set a ceiling on the levels of particulate matter and sulfur dioxide permitted for a given clean-air region. This ceiling would be based on a regional average for these pollutants so that—unlike the Air Quality Increment Plan—this alternative would permit a region to degrade its air severely in one locality so long as the regional average were maintained by the existence of clean-air localities elsewhere in the region.

3. Local Definition Plan: would permit each state to determine on a case-by-case basis whether any new source within its

borders were causing significant deterioration.

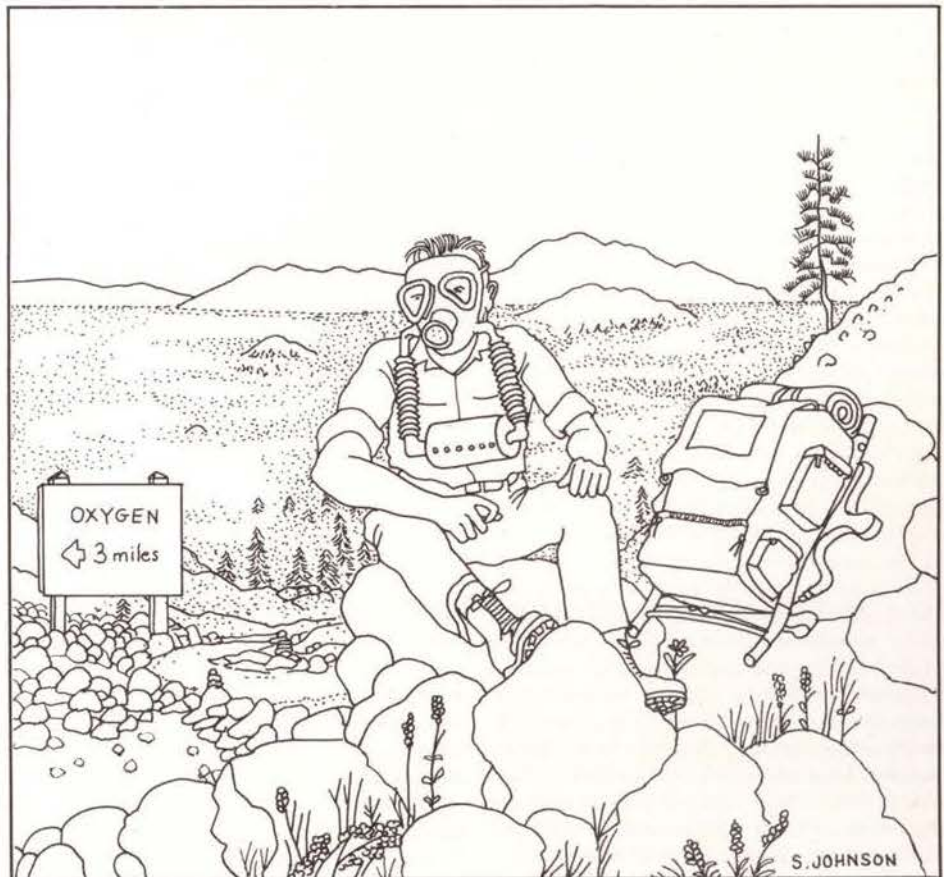
4. Area Classification Plan: would require each state to divide air-quality regions into two zones. In Zone II, emission increases over 1972 levels would be limited as set forth in the Air Quality Increment Plan. In Zone I, which would comprise areas with exceptionally clean air where polluting development is not intended, emission-level increases would be more severely restricted. Exemptions from zone regulations would be allowed on a case-by-case basis as determined by each state.

Each of the four plans requires that the "best available" control technology be utilized in newly constructed business and industrial facilities covered by the EPA's new list of 16 categories of air pollution sources.

The Four Plans Will Not Work

The first to publicly criticize plans 2, 3, and 4 as being unable to prevent significant deterioration of air quality was the EPA itself. But the Sierra Club contends that all four plans would, if adopted as final regulations, promote significant deterioration. The alternatives violate the Clean Air Act and the federal court order in the following respects:

- ONLY TWO POLLUTANTS ARE REGULATED. Even though the court order extends to all pollutants covered by the Clean Air Act, the EPA's four plans offer specific regulations only for particulate matter and sulfur dioxide. Control over other pollutants rests on a blanket requirement that New Source Performance Standards be applied to any new facility that comes under EPA's list of 16 categories of air pollution sources. Unfortunately, as the EPA notes, polluting



sources in clean-air regions may exceed the national air-quality standards even with the New Source Performance Standards in effect.

- **MAJOR POLLUTION SOURCES ARE OMITTED.** Even though the courts have interpreted the Clean Air Act to mean that significant deterioration is to be prevented regardless of the source of the pollution, the EPA's four alternate plans would regulate only 16 categories of industrial facilities and other large stationary air pollution sources. Construction plans for new towns, highways, large shopping centers and other commercial developments, apartment and housing complexes, and mass recreational facilities would be allowed to proceed unregulated. Any one of them is a potential major source of air pollution.

- **PREVENTION OF SIGNIFICANT DETERIORATION IS LEFT IN THE HANDS OF THE STATES.** The federal court has ordered the EPA to "disapprove any portion of a state plan which fails to effectively prevent the significant deterioration of existing air quality" and to issue new regulations for that state. Yet Plan 3 allows the states complete authority to arrive at their own definition of significant deterioration, and Plan 4's exemption provision gives the states a loophole for similar self-regulation. Although 42 states have taken a position against deterioration of air quality, not one has developed an effective enforcement program. The state with tough air-quality controls becomes a two-time loser: (1) industry locates in and contributes to employment and the tax base of neighboring and more lenient states, and (2) the air quality of the state prohibiting significant deterioration may still decline as pollution crosses over state lines from its more lenient neighbors. The states, as a practical matter, cannot adopt significant deterioration prohibitions individually.

- **SIGNIFICANT DETERIORATION IS ALLOWED.** The court order explicitly states that significant deterioration of existing air quality is not to be permitted "in any portion of any state," yet none of the four plans complies with this order. Plan 1 comes the closest to a lawful response. This alternative has the potential for directly defining the amount of deterioration to be permitted in those vast portions of the United States where the air is now significantly purer than the levels set in the national air-quality standards. But in its present form, Plan 1 must also be rejected—first, because like the other three plans it only covers two pollutants (particulate matter and sulfur dioxide); second, because the limits it imposes on emission levels for these two pollutants are too mild to effectively protect clean air; and third, because large increases in emissions from tall stacks—which spread pollution over thousands of square miles, impairing visibility and increasing the acidity of rain—would be allowed because they might not

produce a sufficiently large increase in ground-level concentrations to fall under the restrictions imposed by this plan.

Plan 2's regional pollution averaging system would allow the states to concentrate pollution sources in particular locations, resulting in significant deterioration of air quality in those areas. Plan 3, allowing the states complete authority to define significant deterioration, offers no control whatsoever over the ultimate level of deterioration. A state conceivably could allow the air quality in all of its clean-air regions to deteriorate right up to the levels of the federal air quality standards.

Plan 4 sets pollution-level regulations, but openly establishes exemptions to the regulations wherever there is an "unusual availability of raw materials in the area or in order to support comprehensive, long-range development plans, or to avoid the necessity for locating relatively pollution-prone industries near populated areas." This exception provides a blatant clue to why the EPA has failed to enforce the Clean Air Act. During the proceedings before the Supreme Court, the EPA admitted that its policy is to move major pollution sources from the cities to rural clean-air regions. The Sierra



Club argues that air pollution does not have to be distributed across the country, that the technology already exists to control pollution at most of its sources, that socially desirable growth must be accompanied by a major national effort to plan development, utilize and advance pollution control technology, and conserve energy.

If the EPA's policy is allowed to stand, the air quality outside of the nation's large cities and inner suburbs could deteriorate to the levels set in the federal standards. In other words, the air quality in the Rocky Mountains and the Blue Ridge could deteriorate to the levels now present in Boston, Akron, Detroit, and Pittsburgh. The Southwest is a warning. Today, giant coal-burning power plants have cast a pall over the entire Four Corners region, where visibility once ranged up to 100 miles. There is a haze over

Mesa Verde National Park, and air pollution is even reaching toward the Grand Canyon.

A Plan to Keep Clean Air Clean

It is clear that an effective implementation plan to "prevent significant deterioration of air quality in any portion of any state" should contain the following elements:

First, all pollutants covered by the Clean Air Act should be included in the plan. All significant sources of these pollutants should also be included.

Second, national uniform limits on the allowable increases in ambient concentrations of each of these pollutants should be specified. The magnitude of these increases should be comparable with the values proposed by the EPA in Zone-I areas under Plan 4. These values, in micrograms per cubic meter, are as follows:

(Comparable values should be selected for all other pollutants)

	Annual Average	24 Hour Maximum	3 Hour Maximum
Particulate Matter	5	15	—
Sulfur Dioxide	2	5	25

Third, these allowable increases should be applied to pollutant concentrations occurring anywhere, not just at ground level. A suitable volume of air for averaging the increases in concentrations should be specified to insure that only those major sources which would directly cause significant deterioration would be prohibited. An appropriate volume would be that contained within one kilometer in all directions from the points of emission of the pollutants.

Fourth, an absolute ceiling on increases in emissions from an air quality control region should be specified, as in the EPA's Plan 2, but with more stringent limits. (EPA's proposed ceiling would permit a doubling of the nation-wide emissions of sulfur dioxide.)

Fifth, to simplify the administration of the plan, and to avoid needless inconvenience to those whose activities do not cause significant deterioration, sources emitting less than one ton per year of particulates, sulfur dioxide, nitrogen oxides, and hydrocarbons, and 20 tons per year of carbon monoxides, should be granted exemption.

Sixth, an open process, with opportunity for public participation, should be specified for the review of each application from a prospective pollution source for which a permit is requested.

Register your concern directly with the Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, North Carolina, 27711, Attention: Mr. Padgett. The hearing record on the EPA's four alternative plans will remain open for written comment until October 13. The EPA asks that written comments be submitted in triplicate.

WASHINGTON REPORT

Brock Evans

Oily Politics: the Canadian Caper

THE LONG BRUISING STRUGGLE between environmentalists and the oil lobby finally ended in the climactic month of July, when first the Senate and then the House passed bills authorizing the trans-Alaska pipeline. In an awesome display of power, the oil industry, its supporters in Big Labor, and the Administration pulled out all the stops. Nevertheless, the outcome was much closer than the press may have implied. In the Senate, for example, a 49 to 49 tie vote on the Gravel amendment to exempt the pipeline from NEPA review was broken by Vice President Agnew—in the oil companies favor, of course.

But another story remains to be told—perhaps the most sordid and revealing one of this Watergate summer—of how the State Department withheld critical information about the Canadian alternative route. It is a sad story of how this Administration apparently once again has played politics with the environment to ensure a rosy future for the oil companies, which were so obviously favored in all of their actions.

On June 1, John Melcher, Chairman of the House Interior Subcommittee handling the pipeline question, wrote to the State Department asking for the views of the Canadian government on the proposed alternative Canadian route. The department sent a list of questions for Canadian officials to the American Embassy in Ottawa, but the embassy just "wasn't able" to quickly return two telegrams containing the Canadian reply, which painted a favorable picture of the Canadian alternative and directly contradicted the Administration's own statements.

The State Department made no reference to the June 14 response from the embassy in a June 22 letter to Congressman Melcher and Senator Jackson, which downgraded the Canadian route and again expressed the oil company-Administration viewpoint. Among other things, it claimed that there would be a very long delay in the alternate route and that the Canadians would demand 51 percent ownership of any line.

Congressman Melcher, who in early June had apparently made up his mind to push through the Alaska pipeline, inserted the State Department letter into the June 24 *Congressional Record* and claimed that we now had to go full steam ahead on the Alaska route because the Canadians just wouldn't cooperate. Meanwhile, the Canadian government had been writing a series of specific answers to the American inquiries to supplement the earlier conversations at the embassy. On June 27, the Canadian gov-

ernment handed the embassy these answers—the only official written Canadian expression—but for some strange reason, the State Department claims it didn't even get these responses (which refuted most of the Administration's arguments against the Canadian route) until June 5—a delay of eight days!

On July 6, increasingly disturbed about the Administration's misrepresentations of their position, the Canadian Embassy in Washington set up a meeting with the State Department. Their first request was to ask the department to forward to Congress immediately the specific answers that had been given on June 27. The second request was to ask that it clarify Canada's position on the crucial question of 51-percent ownership (the Canadians had erred in saying that they would want 51-percent ownership of both an oil and a gas pipeline—actually they wanted it only for a gas pipeline). This turned out to be a crucial point in later debate. The State Department balked at sending the whole memorandum to Congress, and tried to delay, but after the Canadians threatened to publicize the whole chain of events the department did agree, on July 7, to send the document to Congress—but without the crucial correction "because it was not in writing." The Canadian government said it did not discover until the following week that the State Department had not sent their corrected response, and it was not until July 16, the day before the final Senate vote, that the department finally forwarded the Canadian response. By that time, the Senate had already debated the issue for five days and, three days earlier, had voted down the proposed alternative, partly on the basis of the previous, faulty information. The shocked Canadians protested, but it made no difference.

On July 16, the Wilderness Society,

Friends of the Earth, and the Environmental Defense Fund sent a letter to Chairman Melcher, whose committee was already beginning the first of several markup sessions, exposing the full text of the final version of the Canadian response. The next day, conservation groups sent the markup session another letter, containing the June 14 telegrams from the American Embassy. The groups asked that the committee suspend action on the legislation until the whole sordid matter had been investigated, but, of course, this was not done—the oil industry wanted the bill through before the August recess, and there was no slowing the steamroller down.

Congressman Melcher ignored the true Canadian position, which refuted most of the remarks he had made in the *Congressional Record* on June 24. He did say that the State Department had withheld critical information, and that when he had time later (after the bill was passed) he would investigate the matter. Senator Henry Jackson put similar remarks of concern into the *Congressional Record* of July 9, and also promised to hold an investigation—but nothing meaningful was done until after the crucial votes were taken.

Now there have been hearings before Senator Fulbright's Foreign Relations Committee, and the whole mess has come out. The State Department claims that it was all a mistake, that they just can't understand why there was so much delay and why the information wasn't turned over to the proper people in time. They claim, of course, that it had nothing to do with the imminent pipeline vote, a vote that might have been changed had the true facts been known.

So the matter stands. We lost, but it was close. At least we fought the good fight and spoke the truth. We did what had to be done, and we can be proud. The real losers, many of us think, are those who ignored the facts, or deliberately withheld them. And so we seem to have the sad situation of one more formerly great government agency, playing politics, not only with the statements of our neighbors, but also with the land itself.

CAPITOL NEWS

Toxic substances bill before committee

OF THE ESTIMATED 250,000 new chemical compounds developed each year, some 300 to 700 are likely to end up in commercial products, and an estimated 100 of these will be toxic or otherwise dangerous, according to a report by the President's Council on Environmental Quality.

Although we have laws to regulate pesti-

cides, food additives, occupational hazards, and atomic wastes, there is no law to adequately cover hazardous substances used in industrial processes and contained in commercial products. Toxic-substances-control legislation now before the House-Senate Conference Committee is intended to cover the entire range of activity by which chem-

EDITORIAL

Michael McCloskey

An Ethic of Care

INCREASINGLY, WE ARE FINDING PEOPLE—even those who are basically sympathetic and who should know better—who perceive the Sierra Club as being too fractious and negative. The perception is unfair, but the image is real. The problem is compounded because our vital interests have expanded vastly and because we are called with increasing frequency to speak for the environmental movement. Our burden and responsibility have increased—we must give voice to those views that otherwise would go unrepresented. Yet it is not good for us to appear so often to be the only voice. Once again, we need to cultivate and encourage more spokesmen and to nurture the entire movement. We also need to seek more timely opportunities to stress our positive programs.

The problem seems especially critical in some rural areas, particularly in the West. Our successes in the Congress and the courts have bred a deep antipathy toward us in many small communities, where we are viewed as a powerful and alien force that aims at depriving them of a livelihood. We have become almost a trade name for their "enemy." We get blamed regardless of whether we have taken a leading part, or indeed any part. This phenomenon is nowhere more apparent than in Alaska, where a group of legislators has moved to pass a bill directing the attorney general of the state to sue us for \$1 billion for damages to the state's economy because of delays in the pipeline. Our aims are misunderstood, and the adverse impact of our programs on their lives is wildly distorted and exaggerated. Some small town editors delight in stirring up this sentiment. In most states, I suspect that the people who are possessed by such hostility are a distinct minority, but in some small communities they may not be. Where this is the case, sometimes other local conservationists would rather not have us involved in projects for fear that our name will arouse needless hostility.

In the past, we have faced such problems in isolated cases, but never in so many places at once. Furthermore, this antagonism comes at a time when we should be trying to make inroads in such communities to warn them that they are being exploited: that they are being cheated out of a future by overcutting, that strip mining is going to destroy their grazing economy, that a horde of off-road vehicles won't mix with stock raising, and that water diversions can dry up their future. The tragedy is that we may now be the last ones they would ever listen to.

Despite these problems, we are making real progress in urban areas. The message environmentalists have been preaching has begun to catch hold with voters in local elections. We are beginning to see the environmental movement find a second wind in electoral results: in Colorado voters turn back a plan for the winter Olympics, in California the coastal initiative passes, and in Texas the Trinity River Barge Canal bonds are defeated. Most new county officials elected in California say they campaigned on environmental platforms, and in the San Francisco Bay Area a whole series of recent elections has favored the local growth and preserving open space. Doubtless, there are examples showing up elsewhere, too as in Fairfax County, Virginia. We might almost begin to theorize that a new split between urbanized and rural American may be developing over the issue of environmental protection.

But it would be too bad if we accepted the inevitability of such a split. To a certain extent there may be nothing we can do about it, but we have too many concerns about the future of the resources beyond the edge of suburbia to write off the future of all who live out there. We need to let the people there know we are really concerned about the future of that land, that we love the land just as they do, and that we are not oblivious to their well-being. Though we may not be equipped to assume much of the burden of finding ways to develop viable economies there, we do need to let them know we regard this as a valid and important concern, and that we are committed to understanding the relationship between this concern and what we advocate. As responsible citizens we should weigh the total impact of our actions before we proceed. We should do the same with respect to whatever we undertake in urban areas.

But even more important than this, we have to find ways of letting the public understand that our basic impulse is one of love for the planet, its people, and all the other things that live here. An ethic of care, restraint, humility, and understanding is what moves us

Continued on page 21

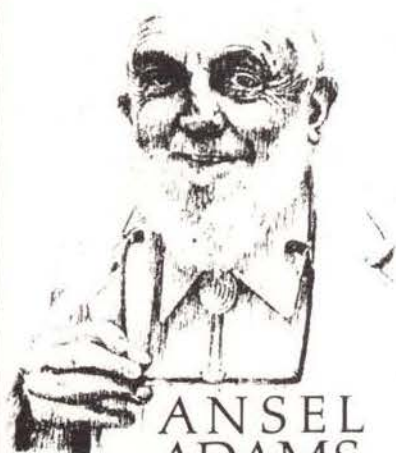
ical substances enter our environment—from extraction and production to consumer use and disposal.

The chemical industry is pushing hard for adoption of weaker provisions. Conservationists should urge conferees to write a strong, effective law containing at least these provisions:

(1) Attention to toxic-substances problems at the earliest possible stage in order to prevent them from becoming hazards to health and later the environment. Adoption of the Senate provision on *relationship to other laws* (section 11 of S. 426) which allows the new law to regulate all toxic substances.

(2) Full and flexible authority for the EPA to require premarket testing of new chemical substances. Adoption of Senate provision on premarket-screening (section 5 of S.426) which (a) requires makers of new chemical substances to notify EPA before commercial production and (b) allows EPA to require premarket testing of new chemical substances which EPA "has reason to believe may pose an unreasonable threat to human health or the environment," but (c) allows EPA flexibility to exempt non-hazardous substances (and their makers).

(3) No blanket exemptions for small businesses from the reporting requirements. Adoption of the Senate provision on *reporting* (section 10 of S. 426) which gives EPA flexible authority to apply the reporting



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requirements to small businesses or to exempt them.

(4) A provision preventing important product-safety data from being kept from public disclosure under the guise of "trade secrets." Adoption of the Senate provision on *confidentiality* (section 16 of S. 426) which gives adequate provision for public access to test data while still protecting a manufacturer's economic interests.

(5) A definition of "chemical substance" to include *mixtures of compounds* to make certain the legislation will cover substances such as asbestos and PCBs. Adopt the House definition of chemical substance (section 3 [a] [2] of H.R. 5356).

Mail on key provisions should be sent immediately to all conferees: House (or Senate) Office Building, Washington, D.C. 20515 (or 20510). House conferees are Chairman Harley O. Staggers (West Virginia), John E. Moss (California), Bill Stuckey Jr. (Georgia), Bob Echkhardt (Texas), James T. Broyhill (North Carolina), John Ware (Pennsylvania), and John Y. McCollister (Nebraska). Senate conferees include Chairman Warren G. Magnuson (Washington), Philip A. Hart (Michigan), John V. Tunney (California), Robert P. Griffin (Michigan), and Marlow W. Cook (Kentucky).

New highway legislation is a mixed blessing

Though mass transit planners throughout the country rejoiced over Congressional approval of a bill allowing the use of billions of dollars in highway funds for construction of urban mass transit, conservationists considered the Federal Aid Highway Act of 1973 (held up in the House until the Nixon Administration gave a clear signal it wouldn't be vetoed) a mixed blessing.

The bill makes available a maximum of \$800 million from the general treasury for urban transit systems for the current fiscal year ending June 30, 1974. Next fiscal year, \$600 million for rail transit will be provided, with another \$200 million potentially coming directly from the Highway Trust Fund. Finally, in fiscal 1976, the full \$800 million would be potentially available from the trust fund.

The plan also applies to perhaps \$5 billion to \$6 billion in funding for controversial urban segments of the interstate highway system, which cities can choose to have switched to transit purposes. Since this total represents piecemeal appropriations over the life of a particular road project, the transfer clause could make available as much as \$400 million or \$500 million a year for transit, according to one estimate.

But a number of provisions were tucked into the bill to ensure that the highway-building spree would continue, reports Sierra Club Assistant Washington Representative Linda Billings. The act contains

authorizations for increased funding for parkways, forest roads, a new priority primary routes system, the Great River Road, and economic growth center development highways. It also contains a scenic highway system study, and special provisions to permit construction of the Crosstown Freeway in Chicago and the San Antonio North Expressway. On the plus side, language weakening the billboard removal program was deleted.

Trans-Alaska pipeline approved by Congress

"The pendulum swings away a little bit, but it will swing back," said Sierra Club Washington Representative Brock Evans after the House followed the Senate's lead and passed a bill licensing construction of a trans-Alaska pipeline and barring further court challenges by environmentalists. (See Washington Report.)

The key House vote was on an amendment by Oregon's John Dellenback to preserve the National Environmental Policy Act, which lost by 23 votes. In this 221-198 vote, the House defeated Dellenback's motion to strike that part of the pipeline legislation that declares the pipeline environmentally acceptable and not subject to further court delays. Then the House went on to pass the overall measure approving the pipeline, 356-60.

In an early vote on Representative John Dingell's unsuccessful amendment to prevent the Interior Secretary from issuing right-of-way permits across wildlife refuges, parks, and wilderness areas without going through a lengthy findings process, Dingell charged that oil companies and the Interior Department were raiding the public domain. Anti-environmental forces were led by Representatives Craig Hosmer of California ("NEPA is just a shuffle of papers, a minuet, a dance . . ."), Lloyd Meeds of Washington, John Melcher of Montana, Sam Steiger of

Arizona ("For some vague reason the deep-breathers are concerned about the bill . . ."), and Gerald Ford of Michigan ("Canada is an unstable nation, potentially very unfriendly . . .").

Evans said the slim margin of defeat on the Dellenback amendment "wasn't bad at all, and this is the real test of our strength. A dozen votes would have meant victory for us. What other outfit could have taken on all the power of big oil, big labor, and the Administration, and still nearly come out even?"

Environmental groups are not responsible for nuclear plant delays

Are environmentalists actually responsible for delays in the construction of energy facilities, as officials of the Nixon Administration have indicated? Not when it comes to nuclear power plants, says Russell Train, head of the President's own Council on Environmental Quality. Of the 75 major nuclear power plants now behind schedule, only nine have been held up by environmental debate, said Train two months ago.

Train's statistics are slightly outdated; current figures are even more revealing. Facts from the Federal Power Commission show that delays in the completion of 30 nuclear and five fossil-fuel units 300 megawatts or larger, which were originally scheduled for commercial operation by this summer, are primarily attributable to "poor productivity of labor," "late delivery of major equipment," "strikes by commercial labor," and "changes in regulatory procedures," in combination with other reasons.

The FPC attributes delays in five cases entirely to regulatory problems of some type, but these can involve a variety of matters other than environmental debate, such as safety certification and related licensing procedures. It appears that only two or three

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of the 35 plants were delayed by environmental considerations alone.

"Our analysis of FPC figures makes it clear that environmentalists have not been responsible for delaying nuclear power," says Richard Lahn, Conservation Chairman of the Sierra Club's Potomac Chapter. "The nuclear industry and the utilities have been trying to put the blame on environmentalists to cover up the problems they themselves have been having in getting their technology worked out and building their plants."

Interior announces new water standards

Newly proposed federal standards for evaluating water resource projects were announced by the Interior Department. Approved by the Water Resources Committee, the proposals awaited only President Nixon's signature before taking effect. The changes generally moved in the direction recommended by the Sierra Club and other conservation groups. Among the most important changes from earlier versions was the adoption of the cost-of-government-borrowing concept to set interest rates, or discount rates at which money for water projects is borrowed, thus reflecting a better estimate of true project costs. The new rate would be established at 6 7/8 percent, and would then change to reflect changes in the cost of borrowing. Other changes include cutting back federal water project planning objectives to only (1) national economic development and (2) preserving environmental quality. This omits such previous objectives as regional economic development and social well-being.

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Russell Train appointed as new EPA chief

Russell E. Train, chairman of the Council on Environmental Quality, was appointed by President Nixon to be the new administrator of the Environmental Protection Agency. A former president of the Conservation Foundation, Train will succeed William Ruckelshaus, who left EPA to become temporary director of the Federal Bureau of Investigation, and now, Deputy Attorney

General Train takes over the EPA at a time when that agency is faced with numerous economic and political pressures to tone down enforcement of air and water pollution control laws. As CEQ chairman, Train was outspoken in defense of environmentalists who were being blamed for energy shortages. He took a leading role in bringing about international agreements to protect endangered species. Train plans to step up research on health effects of pollutants—which *Business Week* reported "will probably show a need for even tougher standards."

NEWS VIEW

Eastern wilderness bill before Senate committee

RETURNING from its August recess, the Senate Interior Committee faced a favorable subcommittee report on the Omnibus Eastern Wilderness Bill providing for wilderness classification for 18 areas in 15 states east of the Mississippi. Just before the recess, the Senate's Interior Subcommittee on Public Lands reported S. 316, which also would designate 37 areas in 17 states plus the Commonwealth of Puerto Rico as wilderness study areas. Inclusion of the 18 "instant" areas totaling 233,274 acres and the 37 "study" areas totaling 394,000 acres was approved by the subcommittee subject to the concurrence of both senators from each state in which an area is located.

The subcommittee's report unanimously agreed to tailor the Eastern Wilderness Bill so as to resemble the Wilderness Act as closely as possible. An Administration amendment to provide a separate definition for eastern wilderness than that found in the 1964 act, for example, was rejected. Management of eastern wilderness areas under the bill will be as stringent as under the Wilderness Act. The subcommittee also

agreed to eliminate the mining and grazing provisions of the Wilderness Act, which apply mostly in the West. The subcommittee adopted language providing the Forest Service with condemnation authority within Weeks-Act lands that make up the eastern national forests. Under this authority, the Secretary of Agriculture is authorized to condemn private inholdings if the ownership and use of the land "frustrates" the management of the area as wilderness. After such a finding is made, he can condemn the property outright and seek an equitable settlement, enter into negotiations with the landowner, or apply a modified version of the Cape Cod National Seashore formula by which landowners could retain life estates. (See box on page 24 for a list of proposed wilderness areas.)

Creeping smog in Utah

A coal-fired electric power plant proposed for southern Utah by a consortium of one Arizona and four California utility com-

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panies to generate power mainly for Southern California would generate three times as much particulate pollution and as much sulfur oxides as all existing power plants in the Los Angeles basin, according to Uinta Chapter Energy Conservation Chairwoman Marga Raskin.

In early June, the Interior Department had decided not to allow construction of the 3,000-megawatt Kaiparowits power plant. The summary report of the Southwest Energy Study recommended against construction of the plant because its impact on the environment would be too great in a region having many national parks, monuments, and recreation areas, which generate a \$50-million-per-year tourist trade.

But then the utilities submitted a somewhat dubious \$1 million environmental report in hopes of persuading Interior Secretary Rogers Morton to reverse Interior's original decision. Morton, under heavy White House pressure, promised a review.

Chairwoman Raskin said the utilities were making impossible pollution-control guarantees, but that even if the plant met present federal air quality standards, visibility in the area would drop from the present 50-80 miles to 13 miles.

Grand Canyon: attrition through "enlargement"

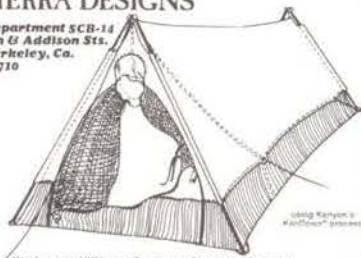
Conservationists with a stake in preserving the Grand Canyon should write immediately to the House Interior Committee, which is now considering legislation to change the boundaries of Grand Canyon National Park. They should urge the Interior Committee to: (1) include all the Grand Canyon from Lee's Ferry to Grand Wash Cliff and all major side canyons except those in Indian reservations; (2) include plateau lands immediately adjacent to the rim of the canyon, which are now threatened by inappropriate development, logging, and the destruction of juniper forests; and (3) at no time remove lands presently protected as national parks and monuments.

Before the August recess, the Senate Interior Committee had taken no action on S. 1296, a bill nominally enlarging the park.

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"Most of the so-called enlargement," according to Sierra Club Southwest Representative John McComb, "is in fact nothing more than a reshuffling of names with little or no material change in the protection afforded" while shrinking the total acreage in the National Park System by 47,000 acres.

Wilderness Conference— October 6-7, 1973 Boulder, Colorado

In case you missed the details on the 13th Biennial Wilderness Conference in the May *Bulletin* (pg. 25), or simply forgot to register, then you can do so now.

If you are concerned about the slow pace of wilderness preservation; if you are disturbed about management practices in defacto wilderness; if you have ideas on wilderness; if you want to prepare yourself for participation in coming wilderness battles: this conference is for you.

It is a participant's conference, designed to bring together the best thinking on all aspects of the problem, and to develop innovative policies and programs to solve them.

To register for the conference, send names and addresses with a registration fee of \$8.00 per person (check payable to Sierra Club) to: Diane Nelson, 1973 Wilderness Conference, High Mar, Box 3241, Boulder, Colorado 80303. For additional information: Margaret Arp, Conference Chairman, 7838 Fairview Rd., Boulder, Colorado 80303. Phone (303) 494-6637.

EPA announces delay in emission reductions

Before his resignation in mid-August, acting Environmental Protection Administrator Robert Fri announced a one-year delay in reduction of nitrogen oxide emissions from cars on grounds that technology was not yet available to meet standards for 1976-model cars. But in granting the delay sought by car makers, Fri said that 1976 models would be required to emit no more than 2 grams of nitrogen oxide per mile, compared to the current 3-gram-per-mile standard.

Editorial (Continued)

and is the approach to living we seek to inculcate. Unfortunately, in seeking to defend nature against the assaults of all those who don't embrace this ethic, we may appear to be too combative and political. We must find a way to inform the public of the true spirit that guides our present course.



THE KUTCHIN

represent a final chapter in a fast-vanishing pioneer way of life. Inhabiting a remote wilderness in east-central Alaska known as the Great North Woods, they are among the very few native North Americans who still hunt, trap, and fish for their survival. Anthropologist Richard Nelson lived among the Kutchin for a year, learning to master the techniques which enable them to subsist.

The results of Nelson's intensive study extend far beyond its significance to anthropology, ethnology, and ecology. *Hunters of the Northern Forest* is also a unique "how-to" manual for the many who feel the urge to get back to nature. Hikers, fishermen, campers, trappers, and the new pioneers interested in homesteading will find here a rare opportunity to explore and use an Indian people's knowledge of the land on which they live. \$10.50

Richard K. Nelson HUNTERS OF THE NORTHERN FOREST

*Designs for Survival among the
Alaskan Kutchin*



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Honorary Vice President Charlotte Mauk dies

On August 11, a longtime conservationist and Honorary Vice President of the Sierra Club, Charlotte Mauk died at the Alta Bates Hospital in Berkeley. Charlotte first joined the Club in her junior year at U.C. Berkeley, and became one of the commissary crew on a High Trip in the Sierra Nevada shortly afterwards. She was known to countless "high trippers" as an experienced mountain chef, as well as an accomplished ski tourer, rockclimber, hiker, and wilderness camper. She served on the Executive Committee of the Bay Chapter and later helped to organize the Mother Lode Chapter.

An editor of the Bay Chapter's *Yodeler*, Charlotte was elected to the Sierra Club Board of Directors in 1943, and she continued to be re-elected for 25 years. The Club's first Wilderness Conference, held in San Francisco in 1949, owed much to her strong interest in wilderness and her participation on the National Conservation Committee. Charlotte served the Club as Secretary from 1959 to 1963 and thereafter as Associate Secretary. She was elected to



the Board of Trustees of the Sierra Club Foundation in 1968 and was active until the time of her death. She was also a director

of the Regional Parks Association and a life member of the Point Reyes Bird Observatory at Bolinas.

A friend said "Charlotte was a free spirit." She camped beyond the Brooks Range in Alaska, in the Galapagos, in Peru and Ecuador, and down to the Amazon's headwaters. She went with zest on difficult and sometimes dangerous trips despite her burdensome arthritis. She loved Switzerland, the wildlife of East Africa, the coral and warm waters of Australia's Great Barrier Reef, and the islands of Tahiti. Many have seen her slides at Sierra Club meetings, and many more will cherish the memories of a friend and companion who savored above all, the resources and beauty of the natural environment.

UN REPORT

Patricia Rambach

"A Brittle Understanding"

A NEW ENVIRONMENTAL ERA was envisioned by the 113 nations that met for the United Nations Conference on the Human Environment at Stockholm in June 1972, but how best to attain world environmental quality has been the subject of long and heated debate since then as the members of the UN have struggled over what should be the "environmental priorities." They started out with 109 recommendations for action agreed on at Stockholm. A year later at the first session of the Governing Council on the Environment the 58 members consolidated these recommendations into an "action program" with seven priority categories, a global "earthwatch" program to assess pollution trends, an Information Referral System, and a checklist of suggestions for future action.

A "brittle understanding" between the industrialized and developing nations at Stockholm on the so-called development/environment issue emerged in a somewhat different guise at the Governing Council session in Geneva, resulting in a continued polarization of objectives for the UN Environment Programme and how international funds are to be used. The industrial-

ized nations want the program to focus on global fact gathering and assessment. They have pressed ahead on arrangements—some already under way—for monitoring by earth satellites of trends of pollution, deforestation, and so forth. They are interested in arrangements for exchange of information and new technology, and have therefore backed a computerized Information Referral System. Developing countries, however, are far behind in training, and in using the new technology, and do not have the economic resources to take advantage of sophisticated environmental information. They tend to view earth monitoring as a form of environmental intelligence that aids advanced economies—not developing ones—in predicting future needs. Moreover, to these countries which constitute two-thirds of the people of the earth, pollution is not an immediate concern when their people live with poverty, disease, and bad housing. Their environmental problems differ but are equally as real and urgent, and reflect the need for economic development. In Africa and India, agricultural areas are degrading at a rapid rate. In Southeast Asia and Latin America, shifting agriculture and the need

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for grazing land are contributing to the rapid depletion of tropical forests. Lack of water is becoming a concern in many regions. Since many countries share these problems, they consider them global, requiring global attention, and want the UN program to deal with them through projects within countries and regions. These countries have also urged that the UN program focus on solving specific problems of an immediate nature.

The United States and other developed countries, however, oppose a national level program approach to issues because they claim it could turn the environment program into another development assistance plan. In the United States this opposition may reflect both current administration policy aimed at altering foreign assistance programs and negative attitudes of some congressmen toward the United Nations and foreign aid.

The seven priority areas agreed on at Geneva cover a broad range of concerns and succeed in reflecting the interests of both developed and developing nations. They represent the results of many hours of negotiation, political trade-offs, and sometimes even astute statesmanship. In order of agreed importance the priority areas are: human settlements (habitat, health, and well-being); land, water, and desertification; education,

training, assistance, and information; trade, economics, and transfer of technology; oceans; conservation of nature, wildlife, and genetic resources; and energy.

Without minimizing the importance of global assessment and information exchange, the Sierra Club supports projects directed toward solving problems common to many countries. The Club has initiated its own task force project—for example, to study the destruction of tropical forests in one country or one region. The objective is to develop guidelines for combatting environmental degradation that can be applied elsewhere. By working at the country level, citizens become more easily aware of environmental implications. If we want the developing world to accept environmental standards, this is an effective way to build such understanding. The developed countries can aid the process if they accept that the developing nations have environmental problems of a different order.

At this beginning stage of international concern, it is important for the UN program to be flexible so that it can deal with both immediate and long-term environmental problems. There is a clear opportunity to do this within each of the seven priorities. But in the end, if the seven priorities of the United Nations Environment Programme—or any priorities—are to be at all meaningful

or effective, if there is to be progress in reaching the goal of world environmental quality, all countries must reassess values and standards of growth and consumption.

The Sierra Club opened its international office in April 1972. Located opposite UN Headquarters in New York City, the office covers intergovernmental activities and global problems, especially marine environment, forestry, and tourism. Pat Rambach, former editor-in-chief of publications at the Carnegie Endowment for International Peace, heads the office and is also the Club's observer at the United Nations. Currently the Club is represented by volunteer members in Geneva, Rome, London, and in Nairobi where the UN Environment office is located. The office publishes a bimonthly newsletter, *International Report*, on international environmental issues. Anyone interested in receiving the newsletter should send a tax-deductible contribution of \$5 or more to the Sierra Club Foundation—International Report, 1050 Mills Tower, San Francisco, California 94104.

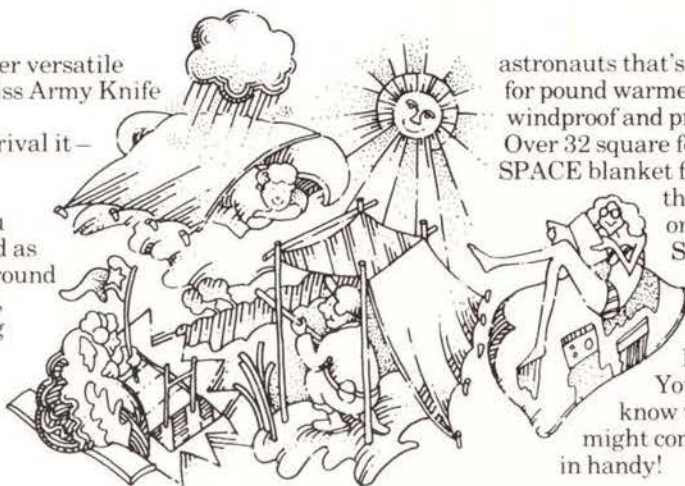
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PROPOSED EASTERN WILDERNESS AREAS

The Omnibus Eastern Wilderness Bill (S. 316) now being considered by the Senate Interior Committee would designate 18 areas in 15 states as wilderness and 37 additional areas for further study for possible future inclusion in the wilderness system.

Recommended Wilderness Areas

Area	National Forest	Size
Bradwell Bay	Apalachicola	22,000
Sipsey	Bankhead	12,000
Cohutta	Chattahoochee & Cherokee	34,500
Laurel Fork	George Washington	11,656
Irish	Mark Twain	19,880
Dolly Sods	Monongahela	10,215
Joyce Kilmer	Nantahala & Cherokee	15,000
Caney Creek	Ouachita	14,433
Presidential-Dry River	White Mountain	23,100
Hercules	Mark Twain	16,400
Ellicitt Rock	Sumter	3,600
Rainbow Lake	Chequamegon	6,600
Gee Creek	Cherokee	2,570
Beaver Creek	Daniel Boone	5,500
Bristol Cliffs	Green Mountain	6,500
Lye Brook	Green Mountain	14,100
Big Island Lake	Hiawatha	6,600
James River Face	Jefferson	8,800

Recommended Wilderness Study Areas

Area	National Forest	Size
Cranberry	Monongahela	36,300
Otter Creek	Monongahela	20,000
Upper Buffalo	Ozark	10,590
Caribou-Speckled Mountain	White Mountain	12,000
Carr Mountain	White Mountain	10,000
Kilkenny	White Mountain	24,000
Wild River	White Mountain	20,000
Great Gulf Extension	White Mountain	12,000
Kisatchee Hills	Kisatchee	10,000
Saline Bayou	Kisatchee	5,000
Blackjack Springs	Nicolet	2,600
Whisker Lake	Nicolet	2,700
Alexander Springs	Ocala	10,000
Sturgeon River	Ottawa	13,200
Belle Starr Cave	Ouachita	5,700
Dry Creek	Ouachita	5,500
Richland Creek	Ozark	2,100
Craggy Mountain	Pisgah	1,100
Chambers Ferry	Sabine	4,000
Joyce Kilmer Extension	Nantahala & Cherokee	16,000
Larue-Pine Hills	Shawnee	2,800
Lusk Creek	Shawnee	11,000
Clear Fork	Wayne	19,000
El Cacique	Puerto Rico	8,500
Flynn Lake	Chequamegon	6,300
Big Frog	Cherokee	3,000
Bell Mountain	Clark	10,200
Rock Pile Mountain	Clark	9,000
Pocosin	Croatan	17,000
Big Slough	Davy Crockett	4,000
Wambau	Francis Marion	1,500
Ramseys Draft	George Washington	6,700
Rock River Canyon	Hiawatha	5,400
Nebo Bridge	Hoosier	32,500
Mill Creek	Jefferson	4,000
Mountain Lake	Jefferson	8,400
Peters Mountain	Jefferson	5,000

Tall Grass Prairie National Park

ONCE MORE the State of Kansas is in the midst of a range war, not this time a dispute involving the God-given rights of cattlemen as opposed to the enshrined privilege of sheepherders, but rather a fight over whether or not a substantial portion of the remaining tall grass prairie should be preserved as a national park. Hard-bitten advocates are easy to find in this battle, ranging from conservationists who demand nothing less than a 60,000-acre park to ranchers who insist that not a single acre should be alienated from its use as grazing land.

I find myself caught in the middle of this dispute, as a Congressional representative of a large part of the area being considered for the park and as the ranking Republican member of the House Subcommittee on National Parks. In both capacities I have the responsibility to weigh competing demands, and to advance a solution that serves the interests of both the residents of the area and the nation as a whole. There is no doubt that the preservation of a significant sample of the original great prairies of America is a worthy and urgent national objective. At the same time, a poorly conceived park plan would cause substantial — and needless — economic harm to local residents.

I believe that there is a solution to the conflict between national and local interests, between conservationists and cattle ranchers; and moreover, that we have an opportunity today to create an imaginative park proposal that will not only preserve an important stretch of tall grass prairie but also will highlight the important historical features of southern Kansas and northern Oklahoma and provide superb recreational facilities for the citizens of the nation.

The idea of preserving a sizable area of native grasslands, so that future generations might see for themselves the kind of country that supported the gigantic herds of buffalo met by the first white men to cross the plains,

probably originated with Dr. E. V. Shelford, of the University of Illinois. As far back as 1915 Dr. Shelford was engaged in research on animal behavior in the prairies. By 1930, with the support of the Ecological Society of America, he had suggested to the National Park Service the wisdom of preserving a representative area of the Great Plains.

The idea took hold, and between 1937 and 1953 park and other federal personnel studied and prepared reports on grasslands in Kansas, Nebraska, Colorado, the Dakotas, and Montana. Among these reports was one in 1950 from the Department of Agriculture to the National Resources Council on the six types of grasslands existing in the West. It recommended preservation of "at least 20,000 acres" of each type. By 1956, the Advisory Board of the National Park Service adopted a resolution recommending that grasslands study be continued with the purpose of finding and acquiring "superlative areas" for inclusion "as national monuments in the National Park Service."

Further studies of grasslands by Dr. G. W. Tomanek and Dr. A. W. Albertson in 1958 and 1959 resulted in a 1960 re-evaluation report authored by the Park Service. This report noted that 24 different grasslands had been surveyed as possible park sites, and that 18 of these were eliminated "because they lacked sufficient scenic variety and appeal, or failed to satisfy the minimum size requirements, or had intrusion of various types." The six remaining areas—in Oklahoma, Kansas, and South Dakota—have been studied and analyzed intensively, and a consensus has developed that the most appropriate location for a Tall Grass Prairie National Park is in the Flint Hills in the so-called Elk-Osage area, which includes parts of Elk, Greenwood, Butler, Crowley, and Chautauqua counties in Kansas and Osage County in Oklahoma.

While the exact location of the park proposal is still subject to National

Park Service studies going on at this time, and while few people (myself included) have inflexible personal preferences for any specific boundaries, there is no doubt that the best location for a grasslands national park is in this southern Flint Hills area. The Flint Hills stretch the entire width of Kansas, from Nebraska to Oklahoma, in the east central part of the state. Here lie some 440,000 acres of grasslands regarded by scientists as the finest example of tall grass prairie in all of North America. Unlike other great stretches of the "true prairie," the Flint Hills have remained as more or less natural pasturelands. The hills are a sedimentary deposit of what geologists call chert, of which the principal component is flint. The flint lies close to the surface, making ordinary cultivation next to impossible.

This is cattle country, some of the best rangeland in America, and this factor introduces the other side to the story of our attempt to establish a prairie park.

The cost of taking over this land touches a sensitive nerve—the money nerve. No matter if this lush prairie will cost \$200 or \$300 per acre, there is a question whether in this era of restricted federal spending the Administration can be persuaded to part with an additional \$12 to \$18 million to buy Kansas grasslands. Even more pertinent is the effect on the more than four score towns and communities in the area suggested for the park. That all will lose revenue in varying de-

Joe Skubitz is now serving his sixth term in Congress as the Representative for the fifth Kansas Congressional District. In it lies a substantial part of the proposed grasslands park. Mr. Skubitz led the successful fight the last two years against the installation of a national atomic waste dump in his state. His current concern is what the installation of a major nuclear power plant adjacent to Redmond Reservoir in his district would do to the temperature of the water, the fish life, and the environmental and ecological impact of the facility.

Views of the Tall Grass

A note from the editors: When we think of the original prairie land, we think of a veritable sea of grass, a sea in which the bison shoaled thick as herring before the days of Buffalo Bill and the market hunters, before the Indians had horses, back at the time when Coronado marched on Quivira. Sixty thousand acres of this sea of life is a tiny fragment—for instance, a square a bit less than ten miles on a side, an area not much bigger than that encompassed in the view at the right. Congressman Skubitz has suggested an attractive compromise with the position of local conservationists in proposing a large scenic easement to bring a 20-25,000-acre park up to 60,000 acres of park-like land. However, the Sierra Club still seeks to have the Park Service acquire at least 30,000 acres outright.





grees goes without saying, and since Federal law no longer requires that payment be made in lieu of taxes for lands taken under eminent domain, the loss of tax revenues to these communities is an economic problem of major magnitude. Another important issue was pointed out to the editor of the famed *Emporia Gazette* by a 69-year-old cowhand who doesn't own an acre of the Flint Hills or a single steer: "In a year of high meat prices, how does the public feel about taking 60,000 acres of grass that produce about 50 pounds of beef per acre out of productivity?"

What then is the answer? Is Kansas and the nation to be deprived of viewing this unique portion of this nation's habitat? Is a thriving cattle business, an industry which, not so incidentally, is Kansas' largest and single highest income producing, to be hampered and reduced in stature? Are landowners whose families for perhaps four generations lived on these lands to be summarily removed by legal process?

None of these consequences need ensue, if only common sense, fairness, and a willingness to "walk a mile in the other fellow's shoes" becomes the precept for those involved in the prairie park controversy. It is possible that a park can be established with a minimum of problems for the landowner, the cattle raiser, and the residents of the affected communities.

The first requirement is an agreement on the size of the area necessary for the prairie park. Every scientific study, report, and recommendation made or referred to during the past 30 years, speaks of a minimum requirement of 30,000 acres, but there is no equally convincing justification for the 60,000-acre figure being promoted by many of today's park advocates. Nevertheless, a 60,000-acre park is possible if federal acquisition is limited to not more than 20,000 to 25,000 acres in fee with an additional 30,000 to 35,000 acres obtained as scenic easement. The easement, while remaining in private ownership, would serve admirably as a buffer zone to protect the federally controlled area from untoward intrusion. At the same time, individual owners of the easement lands would be permitted to continue their ownership, graze cattle, and most important of all, pay taxes and contribute to the social mores and civic responsibilities of the area.

Obviously the cost of such a 20,000-

to 25,000-acre acquisition with federal funds would be far less than that required by a 60,000-acre park, a not inconsiderable factor in these days of tightened budgets. But the key to a satisfactory limited fee-acreage grasslands park is to make it part of an integrated park system in Kansas and perhaps neighboring Oklahoma. If it is to be a fully meaningful and useful national park, it must offer its visitors more than a vista of grass waving in the breeze.

The solution is to combine the Tall Grass Prairie Park proposal with the concept of a neighboring Cherokee Strip National Historical Park, including adjacent recreational facilities to provide a needed balance to the visitor's experience. Plans for this historical park, located in Kansas and Oklahoma, are already far advanced. The National Park Service has prepared a report that assembles the facts and analyzes the basis for such a park.

Premised on the opening of six million acres of Cherokee Indian lands in Oklahoma to white settlement on April 22, 1889, the proposed park would present a panorama of America's trans-Mississippi west where cowboys and sodbusters wrote some of the final pages in the journal of western expansion. In the words of the Park Service report, the park is intended to commemorate "the start of the greatest land rush in the country's history and one of the last. With the close of these land rushes that are so uniquely part of the Kansas-Oklahoma region, the United States for the first time in 250 years was left without a real frontier. The pioneer movement had swept the land from east to west, then doubled back to plug the gaps that remained in mid-continent."

A number of historic sites with nationally significant park values are readily available. The Chisholm Trail, over which approximately ten million Texas cattle were driven to railheads in Kansas in the 20 years following the Civil War went through Caldwell, Kansas, where the outline of the pens for this major 1880's shipping point still exists. In 1871, the peak year of the cattle drives, one cowboy atop a hill saw seven herds to the rear of his own, eight in front, and the dust of 13 more in the distance. The Chilocco Indian School, dating from 1884, and neighboring school lands, presently under the control of the Bureau of Indian Affairs could easily be incor-

porated into the park.

A genuine homesteader's sod house remains north of Cleo Springs, Kansas, and Fort Supply still stands in Western Oklahoma, where several structures remain from the late 1880s. The Cherokee Strip Living Museum, with its wealth of artifacts, is located in Arkansas, Kansas, and the report lists a number of towns with museums and historical landmarks in the area. The proposed Cherokee Strip Park would consist of four related and integrated sites in which a representative portion of tall grass prairie, once purchased, could be easily included.

It is significant to note that the National Park Service stressed the importance of recreation in encouraging visitation. We must realize that a Kansas prairie in mid-summer—the time of greatest tourist travel—is no paradise. Temperatures in excess of 100 degrees are normal, and there is little or no shade. If visitors are allowed to wander through the grass, they are going to be uncomfortably hot and will probably suffer from numerous chigger and other insect bites. The prairie is superb feeding ground for cattle and other foraging animals, beautiful for humans to look at, a haven for entomologists and botanists to study, but no place for the average tourist to walk or camp. It may be heresy for a native Kansan to say so, but our tall grass prairie is no Yellowstone or Yosemite.

Throughout the prairies, from Nebraska to Oklahoma, lie at least a dozen lakes and reservoirs. They range in size from 50,000 acres downward, and all offer the pleasure and esthetic values inherent in cool, fresh bodies of water. No matter where the grasslands park will finally be located, one of these recreation areas lies within easy driving distance. They enhance the worth of the prairie to the visitor and increase the feasibility of the creation of such a park.

It is my strong belief that the opportunity now exists to integrate the historical Cherokee Strip, the existing string of recreational lakes, and the tall grass prairie lands into a meaningful, useful, scenic, and scientific attraction that will preserve values for posterity, ensure environmental control and protection, and make possible the establishment of another major unit of our great National Park System in the middle of America. I am dedicated to such an objective.

Lands (Continued)

southern approaches to Hells Canyon of the Snake River are especially worthy of preserving.

New Mexico's 12,980,000 acres of BLM lands are mainly concentrated in six widely separated regions—the Carlsbad-Roswell region along the Pecos River, the Continental Divide near Lordsburg and Quemado, and the Painted Desert country south of Farmington. BLM lands in southern New Mexico, particularly those remaining from the Gadsden Purchase of 1853, are indeed remarkable because they contain the largest portions of Chihuahua Desert still in public ownership. The most significant areas are the El Paso Gap, the Organ Mountains, the Portrillo Mesa-Kilbourne Hole area, and the Hatcher Peak area. Here fields of tall flowering tree yuccas (mainly *Yucca elata*) exist with century plant, Spanish dagger (*Yucca torreyi*), *Yucca schottii*, sotol, and hundreds of cacti and succulents. The public lands of southwestern New Mexico are especially noteworthy for their rugged old-Mexico-type cordil-

leran ranges, featuring such typically Mexican wildlife as bighorn sheep, the diminutive Coues' white-tailed deer, javelina, and antelope. Public lands in the Carlsbad-Roswell area—long considered chiefly valuable for potash mining—have begun to arouse the interests of naturalists because of their extensive network of caves, such as the remarkable Fort Stanton cave, with its lava tubes and Indian artifacts dating back to the 13th Century. This area also boasts recent sightings of the rare jaguarundi, a small wild cat now seldom seen in the United States. Farther north, near Taos, is the spectacular Rio Grande Gorge, now a wild river. Along the Continental Divide are extensive acreages of public lands of the Painted Desert—including Angel Peaks, the Nacimiento Badlands, and the bizarre "El Bisti" region south of Farmington, which has ragged sandstone, redbed, and shale formations, thousands of tilted and balanced rocks, rock "toadstools," petrified wood, and dinosaur fossils.

Colorado's public lands, as you might expect, are mostly mountainous, rising to more than 14,000 feet in the region of the Lake Fork of the Gunnison River. They also contain a large natural lake formed by Slumgullion Slide, one of America's largest earthslides; and deep canyons with Grand-Canyon-sequence formations, such as the Dolores River Canyon and the geologically significant Unaweep Canyon, which marked the course of the Colorado River before the Uncompahgre Plateau was uplifted.

Wyoming's 17.4 million acres of BLM public lands include the finest antelope ranges in the United States. These lands are mainly concentrated along the Continental Divide in southwestern and north-central Wyoming. The most important of these antelope ranges is in the sagebrush and short-grass plains of the Red Desert and the upper Green River watershed. But Wyoming's BLM lands are not all sagebrush and plains. Such high ridges as Green Mountain near Lander contain extensive forests of lodgepole pine, Douglas fir, and whitebark pine. In 1973, the Wyoming BLM has initiated a withdrawal action for nearly 11,000 acres along the Middle Fork of the Powder River in Johnson Coun-



Rain forest along the Wolf Creek trail in central Oregon.



"Valley of 1,000 Toadstools" in the El Bisti Badlands, New Mexico.

Singing Sand Mountain, near Fallon, Nevada.



ty, which would preserve extensive wildlife habitat, virgin prairie, and scenic river frontage. Sections of the spectacular Big Horn Canyon and North Platte may also be designated as scenic and wild rivers. Primitive-area designations in Wyoming are even more controversial than in Nevada, and conservationists have their work cut out for them in dealing with local BLM officials.

The Montana BLM, in 1972, took the lead in the Rocky Mountain region in the establishment of public land primitive areas—Humbug Spires Primitive Area near Butte and Bear Trap Canyon Primitive Area near Ennis. Still another area being considered is the majestic chain of high Rocky Mountain peaks (some nearly 10,000 feet elevation) in the Centennial Range along the Idaho-Montana line. Perhaps the most important lands remaining on Montana public lands are the broad grassland plains and wild-river stretches along the Missouri River in north-central Montana's Lewistown, Malta, and Miles City BLM Districts. These lands adjacent to the wide and wild Missouri are outstanding for their abundant and unusual wildlife—Rocky Mountain bighorn sheep, elk, black-tailed prairie dogs, the primitive paddlefish, sharp-

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Margaret was found in a back lane of Calcutta, lying in her doorway, unconscious from hunger. Inside, her mother had just died in childbirth.

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