Possible Acid Rain Woes in the West

Damage is not evident as yet, a new report says, but there are plenty of reasons to be worried

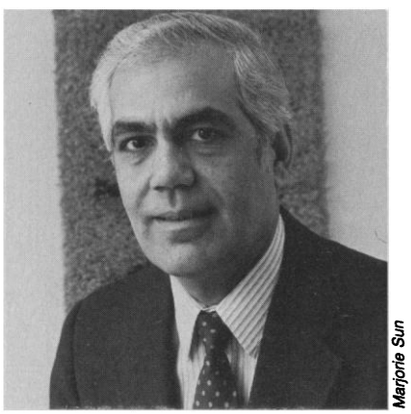
Acid rain may be a growing menace to timber and wilderness in Western states and threaten some of the most scenic landscapes in the country including Yosemite and Rocky Mountain national parks, according to a new report released by World Resources Institute, a center for policy research in Washington. Although attention to acid rain in the United States has focused largely on the Northeast, it now appears that the West Coast faces its own set of problems.

The report, "The American West's Acid Rain Test," is the first study to take a comprehensive regional look at acid rain in the West. It points out that actual environmental damage has not yet been observed because monitoring has only recently begun. But a combination of factors raises serious concerns. Since 1980, substantial data have been gathered on acid deposition patterns in the West. This information, in addition to knowledge about acid rain and its effects on the East Coast and in Europe, suggest that acid rain in the West already may have caused some damage, which has gone unnoticed, or that it will likely harm its fragile environment in the future.

A growing awareness that acid rain is a problem in the West may further complicate the political controversy surrounding solutions to problems in the East. Western states have repeatedly balked at congressional legislation that would require them to help pay to control acid rain in the East. With the problem in their own backyard, there is speculation that the political dynamics may change.

The principal authors of the report are Mohamed El-Ashry, a senior associate at the institute; John Harte, a professor at the University of California at Berkeley; and Philip Roth, also affiliated with Berkeley. According to the report, acid rain is particularly a misnomer of the West's problem because acidic deposition occurs there largely in the form of dry microscopic particles in addition to rain, fog, and snow. Acidic deposition is fanning out across California, Oregon, Washington, Arizona, Colorado, New Mexico, Wyoming, Utah, Montana, Idaho, and Nevada and originates mainly from nitrogen oxides from cars and sulfur dioxide from copper smelter plants and utilities.

The authors base their report on a review of existing scientific literature and conclude that the environment of the West poses special problems that make its mountain ranges more vulnerable to damage than ecosystems in the East. "The things that give the West its beauty are what make it so vulnerable," says El-Ashry. In the West, mountains are steeper and have a thinner soil base. As a result, acid deposition may flow into lakes and streams without being neutralized as much as they would in the East where the terrain is more gently sloped and "deeper soils permit run-off to percolate more deeply into the soil." Western mountains accumulate more snow and, during a spring melt, potentially deliver a burst of acidity to the surroundings. In addition, many lakes in the Washington Cascades, Sierra Nevadas, and the Colorado Rockies have low alkalinities. Some of the lakes are similar in alkalinity to lakes in the East and in Scandanavia, where damage has already occurred. Scandanavia, in particular, has a very similar environment to the western mountain ranges. The report expresses special concern for the Cascades, Rockies, and Sierra Nevadas because they are located downwind from sources of nitrogen oxides and sulfur dioxide emissions that are projected to increase in the next 15 years.



Marjorie Sun

Mohamed El-Ashry

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The susceptibility of forests in the West to damage is less well understood than that of lakes, but the report says there is reason for "valid concern." Forests account for 30 percent of the land in 11 Western states and are commercially important. "Severe damage to forests from pollutants can emerge rapidly, with little or no advance warning," as seen in West Germany where forests showed a substantial increase in damage in just 3 years, the report notes. Unlike the East coast, trees in the West are largely coniferous, and, consequently, leaf damage may accumulate from year to year. Forests in the southern Sierra Nevadas and part of Colorado Rockies may be especially susceptible to damage because they are exposed to high levels of acidic deposition and also ozone, which together may weaken the health of trees.

"Broadly speaking, then," the report says, "the American West's sensitivity to damage from acidic precipitation is reasonably well delineated. The risk of damage . . . is apparent. How long chemical and biological changes might take, however, is still not well understood." Some data suggest that acid deposition has already led to some ecological changes. Federal monitoring during the past 15 years shows that streams in the Colorado Rockies, which is downwind of emission sources, have become slightly less alkaline.

More data are needed in several areas, the report notes. For example, more monitoring should be conducted to pinpoint environmentally susceptible areas, to measure dry deposition, which is thought to be a significant contributor to total acid pollutants, and to determine the ways that lakes and streams respond to acid deposition. Research along these lines might cost another $8 million to $12 million in addition to what the federal and state governments are already spending in acid rain research.

Despite the call for more study, the report contends that actions are now warranted to control emissions because of the "clear evidence" of acidic deposition at sensitive regions and the possibility that chemical and biological damage may be taking place. One recommendation is that the federal government impose tighter restrictions on nitrogen oxide emissions from cars in Washington, Colorado, and, in particular, California. California, however, already has the tightest controls of any state on this type of emission. The report says that state and federal authorities should consider the development of mass transit systems and limiting the use of cars in areas of high pollution.

The federal and state governments should also hammer out an agreement with the Mexican government to limit emissions from two new copper smelters located just across the Arizona-Mexican border and the Phelps smelter in Douglas, Arizona. Emissions from the three plants would affect the Rockies. The report says that if the plants comply with the current rules under the U.S. Clean Air Act, man-made sulfur dioxide emissions would plunge 30 percent by 1988. Negotiations are now under way between the two countries and, as things stand now, the Douglas plant is likely to close because of economic reasons cited by the company.

But if the U.S. can persuade the Mexicans to comply, it may then have to answer to Canada, which has pressed the U.S. to tighten controls and prevent acid rain from crossing over its borders. "It is an interesting and ironic situation," El-Ashry says. Last month, President Reagan named former transportation secretary Drew Lewis to represent the U.S. in negotiations with Canada on acid rain issues, but several advocates for acid rain controls doubt that the appointment will lead to significant changes.

Robert Yuhnke, an attorney for the Environmental Defense Fund, speculates that the problem of acid rain in the West may increase the willingness of states in the region to join forces with its Northeastern siblings and put the issue on the national agenda. But he adds, "It's hard to say." In any case, he and El-Ashry both say that the West will probably still resist any proposal that requires them to foot higher electric bills to alleviate the acid rain problem in the East. (Electric utilities in the Midwest are the main source of sulfur dioxide, which leads to acid rain damage in the Northeast. Legislation considered last year by Congress would have required all states to pay for a control program.)

El-Ashry says that "We have a choice in the West to avoid the damage that has occurred in the East because of acid rain. We have to do more research and take some actions now too." The Reagan Administration is unlikely to be moved, some observers say. Robert Friedman, an authority on acid rain at the Office of Technology Assessment, points out that the Administration—despite strong evidence of acid rain damage in the Northeast—has held fast to its position that more research is needed before any regulatory action can be taken. With little evidence of actual damage by acid rain in the West, the Administration will probably continue just to hold its present course.—**MARJORIE SUN**

NIH Gaining in Grants Battle

In the ongoing battle over the number of grants the National Institutes of Health (NIH) will be able to fund in 1985, things are taking a turn for the better as far as NIH is concerned. In a decision that has surprised many people on Capitol Hill and within the Administration, the U.S. Comptroller General has stated that the Administration's attempt to cut NIH grants from 6500 to 5000 is illegal. Whether the Administration will challenge that opinion has not yet been decided.

Last year, Congress appropriated enough money for NIH to fund 6500 new and competing grants in fiscal 1985, up from approximately 5200 in 1984. But just before Christmas, the Office of Management and Budget (OMB) came up with a unique scheme for cutting the budget by reducing the number of new grants. OMB ordered NIH officials to "forward-fund" 646 grants in 1985, which technically means that grant money from the 1985 budget would be legally committed for 1986 and 1987—the life of a 3-year grant. The OMB's action was frequently described in Washington as being "fiendishly clever," as a way to cut the budget without illegally "impounding" funds.

Senator Lowell Weicker, Jr. (R–Conn.), chairman of the NIH appropriations subcommittee in the Senate, took umbrage. "There is perhaps no legislative success of which I am prouder than my bill to increase research grants by 30 percent to 6500 awards annually," he declared in a speech at Yale. On 4 February, Weicker wrote to Comptroller General Charles A. Bowsher asking for an opinion on OMB's order to NIH. In a letter dated 18 March, Bowsher replied.

Noting that Congress's commitment to 6500 grants was clear from the language in the conference report but not explicit in the actual NIH legislation, Bowsher said ". . . we find that the executive branch is not legally bound to comply with the level of program activity set forth in congressional committee reports for new and competing NIH grants." However, he said when Administration officials choose to ignore congressional intent, "They do so at the peril of strained relations with the Congress. Thus, the executive branch has a practical, though not a legal, duty to abide by such expressions of intent."

Where the Comptroller General may have caught the Administration is in its assumption that the forward-funding order is legal. "The legislation authorizing research grants to the various NIH units does not provide for multiyear grant funding." he wrote. "Without express statutory authority, no agency may obligate an appropriation made for the needs of a limited period of time (usually 1 year . . .) for the needs of subsequent years. In reaching the view that the forward-funding directive violates the law, Bowsher relied on a provision in statute known as the "Bona Fide Need Rule," which says, in effect, that if money is not spent in the year for which it was appropriated, it must be returned to the treasury.

According to Bowsher, Administration officials are well aware of the Bona Fide Need Rule but dispute the opinion that it precludes multiyear or forward-funding in this case. Bowsher construes bona fide need to apply to continuing service contracts, such as those with the Department of Defense and General Services Administration, which leases buildings. It does not look at NIH grants as a service contract. OMB takes the view that because a grant is continuous over three or more years, it can be construed as an obligation under the rule that permits multiyear funding.

At this point, the Administration can accept the Comptroller's opinion and fund 6500 grants. It can argue the case in court. For its part, Congress can try to pressure the Administration into a reversal (as Weicker is trying to do) or it can pass new legislation. In the House, Representative Henry A. Waxman (D–Calif.) introduced a joint resolution requiring that the NIH appropriations money be spent as Congress intended. He now has more than 100 cosponsors. A similar joint resolution will soon be introduced in the Senate by Edward M. Kennedy (D–Mass.). If passed, the resolution would have the force of law. Said one congressional aide, "My guess is that NIH is going to fund 6500 grants this year."—**BARBARA J. CULLITON**