

Illinois Wipes Out State Budget for Psychiatric Research

Illinois governor James Thompson has plunged his state's psychiatric research establishment into alarm and uncertainty with an announcement on 4 August that all state money for mental health research, education, and training will be eliminated in next year's budget.

About \$2 million in state funds as well as \$2.2 million in matching grants will be lost to research as part of \$18 million worth of cutbacks for the state Department of Mental Health and Developmental Disabilities. The cuts are in line with a 3% across the board reduction called for by the governor in a budget veto message on 11 July.

Two institutes are scheduled to close as of 15 September: the Illinois Institute for Developmental Disabilities and the Institute for Juvenile Research. The world-renowned Illinois State Psychiatric Institute (ISPI) will lose all research, education, and training as well as its outpatient unit, which serves about 900 patients a year, and will be reduced to caring for its inpatient load of 200.

Ann Kiley, director of the mental health department, has explained that the cuts are necessary to retain current levels of services for the 20,000 patients in state mental institutions. "Research is valuable but is not a luxury the taxpayers can afford this year," she said. Kiley, who did not consult with institute directors before making the announcement, is the first nonpsychiatrist to head the department. Its clinical director, psychiatrist Paul Schyve, has submitted his resignation as of 15 September.

The announcement has created an uproar among mental health researchers in the state and has generated strong protests from private organizations including the American Psychiatric Association, the American Academy of Pediatrics, and the American Association of Mental Deficiency. However, according to John Davis, professor of psychiatry at the University of Illinois and director of research at ISPI, the decision reflects in part an anti-research bias among some advocates for the developmentally disabled.

Researchers are particularly concerned about the threatened dismantlement of the psychiatric institute. Davis says "this will knock psychiatric research back 10 years in the Chicago community." Unless alternate arrangements are made, the institute will have to back out of two large collaborative depression studies, sponsored by the MacArthur Foundation and the National Insti-

tute of Mental Health. The ISPI staff will be reduced from 447 to 260, and the future of its 24 psychiatric residents is in limbo.

The budget cuts will also affect services funded by the department: administrative personnel throughout the state will be cut by half, and there will be a \$6 million cut in community services. ■

CONSTANCE HOLDEN

Forest Death Showing Up In the United States

Signs of forest decline, which until recently have mainly affected trees in Germany and Eastern Europe, are now unmistakably showing up in the higher elevations of the eastern United States, according to the



Mount Mitchell: Devastation of spruce and fir near the summit has occurred within the past 6 years.

World Resources Institute, a private think-tank in Washington, D.C. While sulfates from acid rain have commonly been thought to be the chief factor, the problem is a far more complex one involving nitrates and ozone as well. WRI is conducting a major project on air pollution and damage to forests and crops.

New data from the southern Appalachian Mountains document surprisingly rapid forest decline in just the past few years, according to a presentation at WRI by Robert Ian Bruck, plant pathologist and forester from North Carolina State University. He said when German scientists came to visit 3 years ago there was no apparent problem, but now there is widespread dieback of the tops of trees and other symptoms of malnourishment that resemble what is happening in Germany. On Mount Mitchell in North Carolina, the highest peak in the eastern

United States, there has been extremely rapid advance in defoliation among red spruce, said Bruck. In 1984, 78% of the trees had less than 10% defoliation. But within 1 year, 39% were up to 50% defoliated. In the same year, tree mortality went up 7% from less than 1%.

Bruck said these elevations are subjected to prolonged exposure to mist and stagnant clouds that provide over half their water supply and contain far more pollutants than surrounding rainfall. Ozone levels are much higher than at sea level, and measurement of acidity in the clouds reveals "shocking" levels hovering at around pH 2.4. No direct cause and effect can be defined, said Bruck; rather, the forests seem to be suffering a generalized "stress phenomenon" resulting from long-term chronic insults, which weaken trees' resistance to many secondary factors such as pests and pathogens.

Bruck believes that the signs becoming manifest are only the latest in a continuum whose end is not in sight, and which started with a long-term decrease in annual radial growth beginning in the late 1950's. ■

CONSTANCE HOLDEN

Chernobyl-Type Accident Deemed Unlikely at Hanford Plant

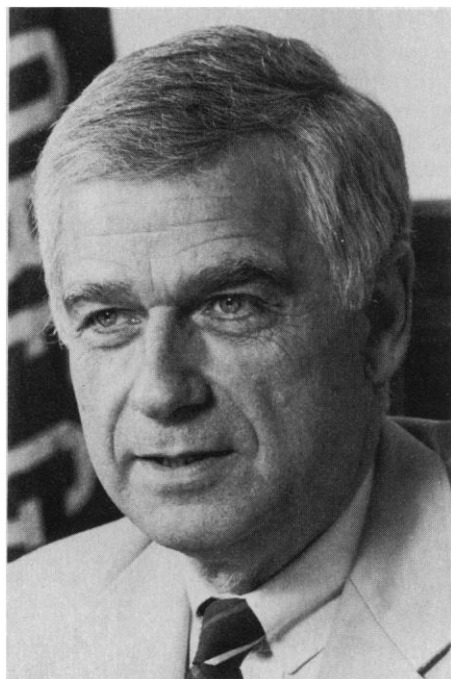
An aging military reactor, operated by the Department of Energy at Hanford, Washington, got a mixed review from the General Accounting Office (GAO) last week, and its long-term future is in some doubt. The plant, known as the N-reactor, has been the focus of much attention recently because it is similar in some respects to the Chernobyl reactor that exploded on 26 April in the world's worst nuclear accident.

The GAO said in a report* that a detailed comparison of the two plants indicates that the N-reactor has design features that would guard against the type of mishap that devastated Chernobyl. However, the report also indicated that many of the N-reactor's systems are deteriorating and estimated that it would require \$1.2 billion in repairs to keep the plant operating beyond the year 2000.

The report had an immediate impact on an appropriations bill for DOE. Senator Mark Hatfield (R-OR), who requested the study, succeeded in persuading a Senate appropriations subcommittee to delete \$23

*"Comparison of DOE's Hanford N-Reactor with the Chernobyl Reactor," General Accounting Office, Washington, D.C. 20548. GAO/RCED-86-213BR.

million from DOE's budget request for projects aimed at keeping the reactor in operation until 2025. Instead, the subcommittee directed that \$20 million be spent on safety projects with a view to closing the facility in the mid-1990's. Hatfield, who chairs the full Appropriations Committee and its energy subcommittee, said in a statement that "any extension of the life of the N-reactor would



Senator Hatfield. *Extending the life of the N-reactor would be economically "foolish."*

be foolish from an economic standpoint."

The reactor, which produces plutonium for nuclear weapons, has a massive graphite moderator similar to that of the devastated Chernobyl plant. It also lacks the containment structures required on civilian power plants, which are supposed to prevent radioactive fission products from reaching the environment in the event of a severe accident. For these reasons, critics have urged that the N-reactor be shut down.

The GAO study concluded, however, that although there are some similarities between the two reactors, there are also some key differences. The most significant concerns the reactors' response to increases in the temperature of the coolant. In the Chernobyl plant, a rise in temperature causes an increase in the nuclear chain reaction. This can lead to instabilities in the core and cause difficulties in controlling the reactor. This instability is now believed to be a critical element in the progression of the Chernobyl accident. In contrast, an increase in coolant temperature in the N-reactor causes the plant's power to decline.

In addition, the GAO study concluded

that some of the safety systems employed at the N-reactor offer advantages over those of the Chernobyl plant. For example, it takes about 1.5 seconds to insert control rods into the N-reactor for emergency shutdown, while the operation takes some 10 seconds in the Chernobyl plant.

The GAO study is far from the last word on the implications of the Chernobyl accident for DOE's reactors. Last month, at DOE's request, the National Research Council began an analysis of the safety of 11 facilities, including military reactors at Hanford and Savannah River, North Carolina. ■ COLIN NORMAN

Senate Amendment Seeks Curb on Pork Barrel Funding

The Senate has adopted an amendment to a military funding bill that could make it more difficult for Congress to order the Defense Department to bankroll specific university projects that have not been fully reviewed and properly authorized. The amendment, proposed by Senators John Danforth (R-MO) and Jeff Bingaman (D-NM), was approved by the Senate with virtually no debate and it has drawn very little public attention.

The measure, which was attached to the Defense Authorization Bill, states that that bill does not authorize expenditure of any Defense Department funds on university projects unless the Secretary of Defense has determined that the projects have some military relevance and "that the grant or contribution is based on the technical merit of the proposed research." In practical terms, the amendment is designed to prevent the Senate Appropriations Committee from directing the Defense Department to fund particular projects that have neither been reviewed by the department nor authorized by the appropriate congressional committees.

Last year, the Senate Appropriations Committee earmarked some \$65.6 million of defense R&D funds for specific university projects that had not gone through the usual merit review. Danforth led an unsuccessful attempt to delete the funds by offering an amendment on the Senate floor in June (*Science*, 11 July, p. 145). This time, he is attempting to tie the appropriations committee's hands by getting the Senate to state in advance that no funds have been authorized for such projects. Although it falls well short of being a blanket prohibition against pork barreling, the measure would make any

earmarked funds much more vulnerable to challenge.

The House version of the defense authorization bill contains no similar provision, but members of the House Armed Services Committee are clearly in sympathy. The House committee's report on the authorization bill contains a strong statement condemning the practice of pork barrel funding of university facilities and says "if it were possible to do so, the committee would propose to erect a permanent bar against earmarking of funds for research and research facilities." This sentiment suggests that Danforth's amendment is likely to survive when a House-Senate conference committee irons out differences between the House and Senate versions of the bill. Members of the Armed Services Committee will represent the House in the conference committee.

The measure applies only to Defense Department funds. There are, of course, other budgets to raid. Just last month, the House approved expenditure of some \$69.7 million of Department of Energy funds on eight projects that have not gone through the usual review procedures (*Science*, 8 August, p. 616.) ■ COLIN NORMAN

Biotech Field Test Halted By State Court

Plans to conduct an outdoor experiment in California with a genetically altered microbe are on hold again.

On 4 August, the Sacramento County Superior Court issued a temporary restraining order that barred University of California researchers from starting the field test on 6 August. The scientists, Steven Lindow and Nickolas Panopoulos, have modified bacteria to prevent frost formation on plants and had planned to test them on potato plants in Tulelake, located in northern California.

The court action was based on charges brought by a local citizens group and the activist Jeremy Rifkin. They claimed that the state department of food and agriculture, which had sanctioned the experiment, had failed to conduct its own environmental impact analysis of the proposed test as required by state law. A court hearing is scheduled for 22 August.

The experiment was approved in May by the U.S. Environmental Protection Agency after a lengthy and rigorous review, but since then it has been stymied because of community opposition. ■ MARJORIE SUN