

Rural drinking water contamination

Nearly 39 million people—or 63 percent of all rural Americans—drink contaminated and possibly unsafe water, according to a recent report prepared by Cornell University for the Environmental Protection Agency. The “National Statistical Assessment of Rural Water Conditions,” the first nationwide analysis of rural drinking water quality, was mandated by Congress with the Safe Drinking Water Act of 1974. Researchers analyzed water from 2,654 rural households (primarily private wells) for 43 different physical, chemical, bacterial and radioactive substances. The most serious problem they found was bacterial contamination—present in 29 percent of the homes. In addition, 25 percent of the households use water containing levels of mercury that exceed EPA drinking water standards; 17 percent, lead; and 14 percent, selenium. Although principal investigator Joe Francis says, “We did not witness . . . widespread water-related medical problems,” the researchers also note that the long-term effects of toxic chemicals are not known. The report neither discusses possible causes of the contamination nor makes recommendations. Because most of the water systems are small and privately owned, EPA recommends that “state and local governments take appropriate measures to improve rural water supplies.”

Endangered Species Act—home free?

After more than six months of debate, both houses of Congress have passed bills reauthorizing funding for the Endangered Species Act. Almost identical, HR6133 and S2309 will go to a conference between the two houses later this month. Contrary to the wishes of Interior Secretary James Watt (SN: 2/27/82, p. 134), both bills call for a three-year (rather than one-year) reauthorization at a funding level equivalent to past levels. While they include several amendments, the bills are “balanced,” says Roger McManus, endangered species program coordinator for the Center for Environmental Education.

Among the most important changes proposed are: a requirement that decisions to list or not list species as endangered be made within one year of their proposal; a shortened and streamlined procedure that can exempt federal projects from requirements of the Act; and a provision that encourages states to accept so-called “experimental populations” of endangered species (like captive-born animals) on their lands. All three amendments are supported by environmentalists and the latter two by industry as well. The final bills come as a great relief to many conservationists who—after listening to some of the original proposals—expected the worst. When asked why Congress made only mild changes to the Act, McManus told SCIENCE NEWS: “They looked at the facts and the facts suggested that the Act worked well—there was just no reason to change it.”

State of the Environment 1982

To the surprise of some other environmental groups, The Conservation Foundation, a nonpartisan research organization that neither lobbies nor litigates, recently joined the rest of the movement in criticizing the Reagan administration. “Significant changes have occurred in the last 18 months . . . these changes can be summed up in three words: deregulation, defederalization, defunding,” said William K. Reilly, president of the Foundation—also known as the “Vatican of the conservation movement.” The group’s criticism accompanied release of its 439-page report “State of the Environment 1982.” While the report notes “impressive progress” on “conventional” environmental problems, it expresses concern about new issues that have, it says, been ignored by this administration. These include toxic pollutants, ozone depletion, acid rain and hazardous wastes.

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Earth science briefs

- Arctic air shows “surprisingly high” levels of soot, report scientists from the University of California’s Lawrence Berkeley Laboratory. Analysis of the soot revealed graphitic particles in large concentrations that the scientists attribute to burning of fossil fuels. Because the black carbon particles effectively absorb solar radiation, they could contribute to heating of the atmosphere, much in the way that increased levels of carbon dioxide are expected to induce global warming as the gas prevents heat from radiating back out to space.
- Dark solar clouds, called filaments, as high as 30,000 miles cast shadows on the sun’s face and may be useful in predicting major magnetic storms on earth. After two magnetic storms occurred in 1981, solar forecasters with the National Oceanographic and Atmospheric Administration in Boulder, Colo., looked at photos taken of the sun in the days preceding the storms. They saw that in each instance, a filament had abruptly disappeared. In April of this year when another filament vanished, the scientists tested their hypothesis. Sure enough, two days later on April 24, a magnetic storm occurred that was strong enough to produce a visible aurora in the northern United States and to disturb operations of communications systems. Magnetic storms do not follow every filament disappearance, the scientists note.
- During a helicopter survey of the east coast of the Antarctic Peninsula, Oscar Gonzalez-Ferran, a participant in the Chilean Antarctic program, spied two volcanoes, one of which was still steaming. The volcanoes, previously unknown, were surrounded by volcanic debris that indicates recent eruptions. There now are five known active volcanoes in Antarctica. Gonzalez-Ferran links the volcanism to subduction of the Pacific plate beneath the Antarctic plate, the U.S. National Science Foundation reports.
- In May 365 tornadoes whirled through the United States, marking the highest number of funnel clouds in any month since 1950 when NOAA began keeping reliable records. The previous record of 275 twisters was set in May 1965.
- As part of a joint two-year project, the United States and India are installing 50 accelerographs to record strong ground motions in the Himalayan region, an area prone to destructive earthquakes. The project is coordinated by the National Science Foundation and the Indian Department of Science and Technology.
- During the first four months of 1982, 11 earthquakes ranging in Richter Scale magnitude from 2.8 to 5.7 shook the eastern United States. In 1981, 16 quakes were felt in the same region over a one-year period, the United States Geological Survey reports.

U.S. oil revenue estimates: A dim view

When the Reagan administration moved last year to accelerate leasing of the Outer Continental Shelf for oil exploration and drilling, it projected unprecedented revenues of \$18 billion for fiscal year 1983. The estimate later was revised down to \$15.7 billion, itself twice the projection for fiscal year 1982. Despite the revision, according to a report released by the General Accounting Office, it is unlikely that even the \$15.7 billion figure will be realized. The report notes that achievement of the estimate depends on the Department of Interior’s precision in estimating bonuses for two sales in the Gulf of Mexico, and on the release of escrowed funds from previous sales. Both increased bonuses and the release of funds are uncertain. GAO recommends that Interior take a close look at the methodology and assumptions used in the budget model. Critics of the leasing program have suggested that the original estimate was a “technique to reduce projected budget deficits.”

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