SCIENCE NEWS®
The Weekly Newsmagazine of Science

A Science Service Publication
Volume 135, No. 2, January 14, 1989

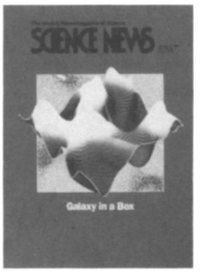
Subscription Department
231 West Center Street, Marion, Ohio 43305

Subscription rate: 1 yr., $34.50; 2 yrs., $58.00. (Foreign postage $6.00 additional per year.) Change of address: Four to six weeks' notice is required. Please state exactly how magazine is to be addressed. Include zip code. For new subscriptions only call (1) 800-247-2160. Printed in U.S.A. Second class postage paid at Washington, D.C., and additional mailing offices. Title registered as trademark U.S. and Canadian Patent Offices. Published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington, D.C. 20036. (202-785-2255)
ISSN 0036-8423

This Week

Research Notes

Articles



Departments

Letters

Pollyanna approach to pollution?

After reading "What's Going on Down There?" (SN: 12/3/88, p.362) regarding groundwater contamination and cleanup techniques, I cannot help feeling disheartened by some of the comments in the article. The "don't worry, be happy" attitude expressed by Jay Lehr of the Association of Groundwater Scientists and Engineers, regarding the safety of contaminated water supplies in a nation of incredible cancer statistics, is misleading at best and dangerously irresponsible at worst. Also, when a member of the U.S. Geological Survey regards venting a contaminant from the ground to the atmosphere as an acceptable solution, I can only assume that we will soon be breathing our pollution instead of drinking it.

Attitudes like these may be as much of a threat to our environment as the "dump now, pay later" approach of many polluters.

Christopher A. Shuman
University Park, Pa.

As a Sierra Club volunteer long active in working to protect groundwater, I was pleased that you brought attention to the serious and growing problem of groundwater contamination. I think, however, that the impression left by the article may be too positive.

The first issue is the safety of public water supplies. The EPA has still not set limits for most of the common contaminants of drinking water. Public water supplies are not, therefore, routinely tested for their presence. It follows that no one has any idea how many public water supplies are contaminated.

Another issue is computer modeling. This can be useful in an area with fairly uniform subsurface geology, as illustrated in the article – especially when the model is calibrated against actual measurements. However, in those large areas that were covered by ice during the last glaciation, the preglacial topography is often completely hidden by deposits of gravel and clay. Because the sea level now is higher than when the valleys were cut, this ancient drainage pattern sometimes persists intact beneath the more recent material. As a result, subsurface water may even flow "uphill," relative to the present surface topography. There are also impervious banks of clay that impede the "natural" flow of water within the mass of porous sand and gravel.

The last issue is cleaning up pollution by using bacteria. Although your article clearly states that this technique will work in soil above the water table – in fact, for spills only – it does not adequately emphasize that spills constitute only a small percentage of groundwater pollution problems. In the majority of cases, the source is a lagoon or an underground storage tank, often at or below the water table. Even in the case of spills, it doesn't take many minutes for liquids to penetrate through the thin New England soil into the gravel and down into the water table. In these cases, pumping water from near the source of pollution and stripping volatiles by breaking the water into small particles ("air stripping") is still the only effective method of cleaning up contaminated aquifers.

Gilbert K. Woolley
Newton, Mass.