

## Rachel's Environment & Health News

### #272 – After 12 Years Studying Toxic Dumps, Government Knowledge Remains Sketchy

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How much toxic waste is generated in the U.S. each year? Where does it go? And does it endanger the public? In 1992, 12 years after the federal government officially began studying these questions, you might think it would be easy to find answers, but you would be disappointed.

In 1973 U.S. Environmental Protection Agency (EPA) estimated annual U.S. toxic waste production at 10 million tons, or roughly 100 pounds for each person in the U.S. Throughout the '70s, that was the official story. Eight years later, in 1981, EPA estimated annual U.S. toxic waste production at 290 million tons, or roughly one ton per person per year.[1, pg. 60] Throughout the '80s, that was the official story. In 1989, the American Chemical Society estimated annual U.S. toxic waste production at somewhere between 580 million tons and 2.9 billion tons. [See REHW #148.]

An estimated 300 million tons of hazardous waste is managed according to rules established by the Resource Conservation and Recovery Act (RCRA)--the nation's official law for managing hazardous wastes from cradle to grave. (pg. 102) Therefore, based on the American Chemical Society's estimate of the size of the hazardous waste problem, RCRA sites are handling somewhere between 10% and 50% of hazardous waste. The remainder of the waste is being handled outside the RCRA system.

Where does hazardous waste go?

The vast majority of hazardous waste has gone--and still goes--into the ground somewhere via pits, ponds, lagoons, and landfills, where gravity pulls the waste down into the ground, or it has gone into deep injection wells, where the waste is pumped under pressure down into the ground.

In 1980 Congress passed CERCLA [Public Law 96-510], commonly known as Superfund, which required EPA to locate all contaminated sites, establish priorities for cleaning them up, then clean them up. Many people assume that, because Congress passed a law to control this problem, it must be under control. They would be disappointed. EPA has listed just over 1200 sites as official Superfund sites at this point. But EPA knows of 32,000 additional sites that contain chemical wastes; the agency has said it keeps the official Superfund list relatively small because it isn't able to manage the cleanup of more than the 1200 sites it has listed so far. (pg. 77) (As we saw last week [REHW #271], EPA is probably right about this. Spending at least \$7.5 billion over the last 12 years, the agency has managed to clean up only 64 sites.)

Unfortunately, there is evidence that even EPA's list of 32,000 sites merely scratches the surface of the problem. In 1989, one of Congress's research organizations, the Office of Technology Assessment (OTA), gathered information from government agencies besides EPA and concluded that the number of chemically-contaminated sites is much larger than even EPA's list of 32,000. OTA said that, if you include military sites, mine wastes, leaking underground storage tanks, pesticide-

contaminated sites, non-military federal properties, radioactive release sites, underground injection wells, municipal gas facilities, and wood-preserving plants, there are probably about 439,000 chemically-contaminated sites. (pg. 76)

Why does EPA estimate there are 32,000 sites and OTA estimate there are 439,000 sites? It is because no single government agency keeps a complete inventory of sites, and there is no government program to discover new sites. As OTA reported in 1989, "EPA has never requested funds from Congress for site discovery. EPA has no site discovery program, has no budget for site discovery, and does not allow States to spend Superfund money for site discovery." (pg. 77) New sites are discovered by accident as farmers or hunters stumble upon them, or by householders who smell strange odors in their water or whose children complain of rashes and dizziness. State government agencies learn about sites and report them to federal officials in at least six different programs, but federal officials in the different agencies do not communicate well, if at all, and some agencies do not even maintain records of the sites they learn about.

Does hazardous waste endanger the public?

The National Academy of Sciences published a new book late last year-- from which all the preceding information about contaminated sites is taken--trying to answer that question. The Academy concluded, from the few sites where human health has been studied, that there is good evidence people have been harmed by chemical contamination--including birth defects, nervous system damage, damage to the immune system, skin disorders, kidney and liver diseases, blood disorders, cancer, and more--but no one knows what is going on at most sites. (pg. 104) There is little doubt that hundreds of toxic chemicals reside at each of these sites--but it is not certain to what extent most people have yet been exposed and thus directly affected. For this reason, no one knows the extent of the harm to public health today. ("[W]e find that the health of some members of the public is in danger," the Academy said [pg. 97], but "We are currently unable to answer the question of the overall impact on public health of hazardous wastes." [pg. 21])

However, saying we don't know the extent of the problem is quite different from saying there is no problem.

The Academy points out that "Millions of tons of hazardous materials are slowly migrating into groundwater in areas where they could pose problems in the future, even though current risks could be negligible." (p. 10) The Academy points out that half the U.S. population, and 95% of the rural population, relies on groundwater as its main source of drinking water. (pg. 5)

One federal agency studied 725 Superfund sites to learn how many people live nearby and they found 4.1 million people living within one mile of a contaminated site; nearly half of these (46%) are women of child-bearing age, are children, or are elderly persons, "all of whom can be considered at particular risk from toxic chemical exposures," the Academy said (pg. 68).

If four million people live within one mile of 725 official Superfund sites, how many people live within one mile of the 439,000 chemically- contaminated sites that OTA identified?

In typically understated fashion, the Academy speculates about people who are being exposed today without anyone paying attention: "...the committee does find sufficient evidence that hazardous wastes have produced health effects in some populations. We are concerned that populations may be at risk that have not been adequately identified, because of the inadequate program of site identification and assessment." (p. 20) WE ARE TOO.

--Peter Montague

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[1] Throughout this week's text, page numbers inside parentheses refer to pages in the National Academy of Science's recent book ENVIRONMENTAL EPIDEMIOLOGY, VOLUME 1: PUBLIC HEALTH AND HAZARDOUS WASTES. \$29.95 plus \$3.00 shipping, from: National Academy Press, 2101 Constitution Ave., NW, P.O. Box 285, Washington, DC 20055. Telephone: (202) 334-2000. THIS IS AN EXCELLENT BOOK.

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