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THE TOTAL COSTS OF CLEANING UP NONFEDERAL SUPERFUND SITES

The effort to clean up the nation's hazardous waste sites has proved to be more costly and time-consuming than expected in 1980, when the Congress created the Superfund program. According to a new Congressional Budget Office (CBO) study, *The Total Costs of Cleaning Up Nonfederal Superfund Sites*, future Superfund costs could reach \$75 billion or more and could continue through the year 2075. These costs include all public and private Superfund expenditures except those associated with cleaning up federal facilities (such as military bases or weapons production facilities) and are in discounted dollars--a measure that takes into account the time value of money.

Future Superfund costs are highly uncertain, mainly because of uncertainty about the number of additional contaminated sites that will be discovered and placed on the National Priorities List (NPL) for cleanup. Accordingly, CBO analyzed three scenarios chosen to represent the range of plausible assumptions about the number of sites and the costs of cleanup. In the absence of changes in policy or breakthroughs in technology, which the scenarios do not consider, the study finds that Superfund's remaining costs are large under all circumstances.

CBO's base case assumes that a total of 4,500 nonfederal sites are ultimately placed on the NPL, roughly four times the current number, and estimates that Superfund will cost the public and private sectors about \$75 billion from fiscal year 1993 onward, in discounted dollars (using a 7 percent annual discount rate). Parties liable for cleanup at individual sites and state governments directly pay more than half of the total; the federal government, which can seek to recover its costs from liable parties, initially pays for 38 percent, or close to \$30 billion.

The low case differs from the base case most significantly in assuming that the Environmental Protection Agency (EPA) ultimately places 2,300 nonfederal sites on the NPL; estimated low-case costs from 1993 on are roughly \$40 billion in discounted dollars. The high case assumes a total of 7,800 nonfederal NPL sites and yields an estimate of \$120 billion.

The study's estimates imply that most Superfund costs are still to come. Combined public and private spending commitments made between 1981 and 1992 total less than \$30 billion in discounted terms. This represents roughly 20 percent to 40 percent of the economic value of the program's total costs. In real dollars (adjusted for inflation but not discounted), commitments through 1992 constitute only 5 percent to 17 percent of the ultimate total.

Under CBO's base-case and high-case assumptions, Superfund will need large increases in its budget to avoid a growing backlog of sites awaiting study and cleanup. Annual Superfund spending by the federal government, which reached \$1.7 billion in 1992, is estimated to double by the year 2003 in the base case, in the absence of constraints on funding, and to triple by 2003 in the high case. Costs to liable parties rise even more sharply over the same period. In all three cases that CBO analyzed, required contributions by the states rise dramatically from current levels, although they remain a relatively small share of total costs.

CBO's estimates of future Superfund costs are more comprehensive than earlier estimates developed by EPA and academic researchers. Measured in undiscounted dollars for comparability, the CBO base-case estimate is larger than its predecessors. CBO's analysis estimates lower average cleanup costs per site, however, in part because it assumes that fewer of the most expensive waste sites remain to be found and that cleanups conducted by liable private parties cost less than they would if conducted by EPA.

Questions about the study should be directed to Perry Beider of CBO's Natural Resources and Commerce Division at (202) 226-2946. The Office of Intergovernmental Relations is CBO's Congressional liaison office and can be reached at 226-2600. For additional copies of the study, please call the CBO Publications Office at 226-2809.



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