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Environmental Costs

Rough Weather Ahead for Small Communities?

by Richard J. Reeder

Having made it through stormy economic times in the 1980s, many rural communities have seen sunny days in the 1990s. For the first time in years, rural unemployment dropped below the urban rate, and population growth returned to much of rural America (see Barkley, Henry, and Bao, *CHOICES* Fourth Quarter 1994). Still, many small-town officials fear that their communities may be overwhelmed by the growing environmental costs now clouding their horizon.

According to a 1991 report issued by the Environmental Financial Advisory Board (EFAB), communities with populations under 2,500 will increase their capital spending on drinking water, wastewater, and solid waste infrastructure by \$10 billion (in 1986 dollars) from 1991–2000. Additional spending will be required to operate these facilities and to clean up miscellaneous environmental problems, such as toxic waste, pesticides, and under-

ground fuel storage tanks. Federal legislation may help curtail some of these costs, but it will take the coordinated efforts of many government and nongovernment entities to help small communities meet the organizational, technical, and financial challenges associated with maintaining a clean and safe environment.

Environmental costs rising rapidly

A 1990 study by the Environmental Protection Agency (EPA) projected that local governments would increase their inflation-adjusted spending on environmental services (covering air quality, drinking water, wastewater treatment, solid waste, hazardous and toxic wastes, pesticides, underground storage tanks, and other potential problems) by 65 percent, or nearly \$21 billion (in 1988 dollars) between 1987 and the year 2000. Three-fourths of this increase is required just to maintain the 1987 level of environmental quality. One-fourth of the projected cost increase—about \$5.2 billion—covers compliance with new environmental standards that were “proposed” or “in development” in 1987 (figure 1). These conservative estimates cover only twenty-two of thirty-seven regulations pending in 1987, and they exclude bond finance transaction costs.

Differential impacts on communities of different sizes

Per household, small communities pay more than large communities to preserve and upgrade the environment. For communities with populations between 500 and 2,500, the EPA projects that the environmental cost for the year 2000 will be \$763 per household, an inflation-adjusted increase of \$290 over the 1987 level. For very small communities (populations under 500), annual household payments will average \$1,580 by the year 2000, an increase of \$910 from 1987. For larger communities (populations over 2,500), the EPA projects en-

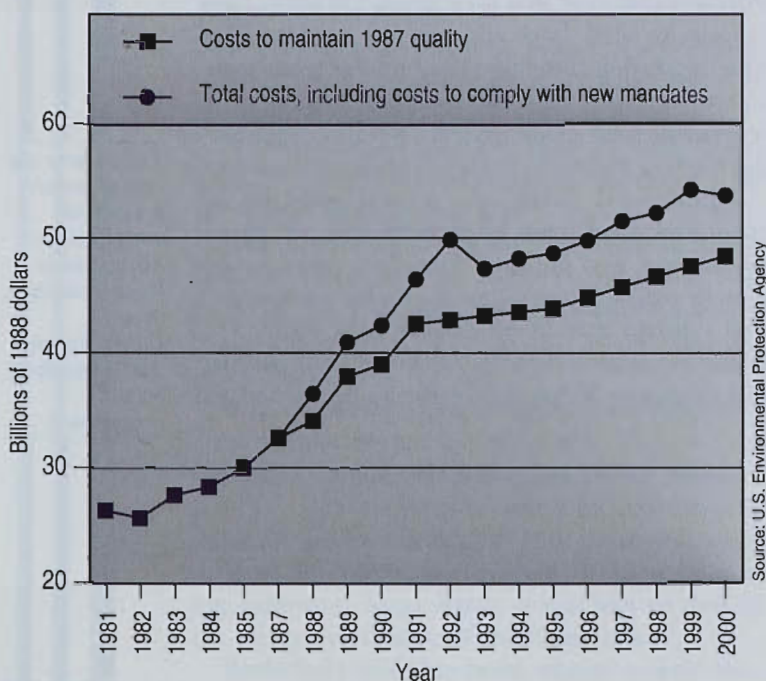


Figure 1. Local government cost projection for environmental services

vironmental costs in the year 2000 to be \$436 to \$665 per household (figure 2).

Regardless of the size of community, most of the projected spending increase reflects the cost of simply maintaining the 1987 level of environmental quality. However, the additional cost of complying with new, post-1987 regulations will be \$317 per household in very small communities, more than three times that of any other community size group, accounting for one-third of the spending increase in very small communities.

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The cost burden hits small communities harder, too, because their households earn about one-fourth less income than the U.S. average. The EPA estimates that households in very small communities spent 2.8 percent of their 1987 incomes on environmental services, compared with 1 percent of income in large communities (over 50,000). The EPA projects that this disparity will increase over time, so that by the year 2000, very small communities will spend 5.6 percent of their household incomes on environmental services, compared with 1.1-1.5 percent of income for large communities (figure 3). The severity of this tax burden might be gauged by comparing it with the current tax bite. Nationwide, total locally raised taxes and user fees account for only about 7 percent of local personal income. Thus, in very small communities, annual local government spending on environmental services might come close to the total revenues they now raise for all of their local government services.

Why high costs?

Small communities lack cost-cutting economies of scale. For example, monitoring for drinking water impurities costs about the same in both small and large communities, but in small communities the costs must be shared by fewer households, which raises costs per household or costs per dollar of community income. Also, in urban areas, economies of scale can often be achieved by the joint operation of water and waste facilities by adjoining communities. But in sparsely populated areas, distances often preclude such collaboration among

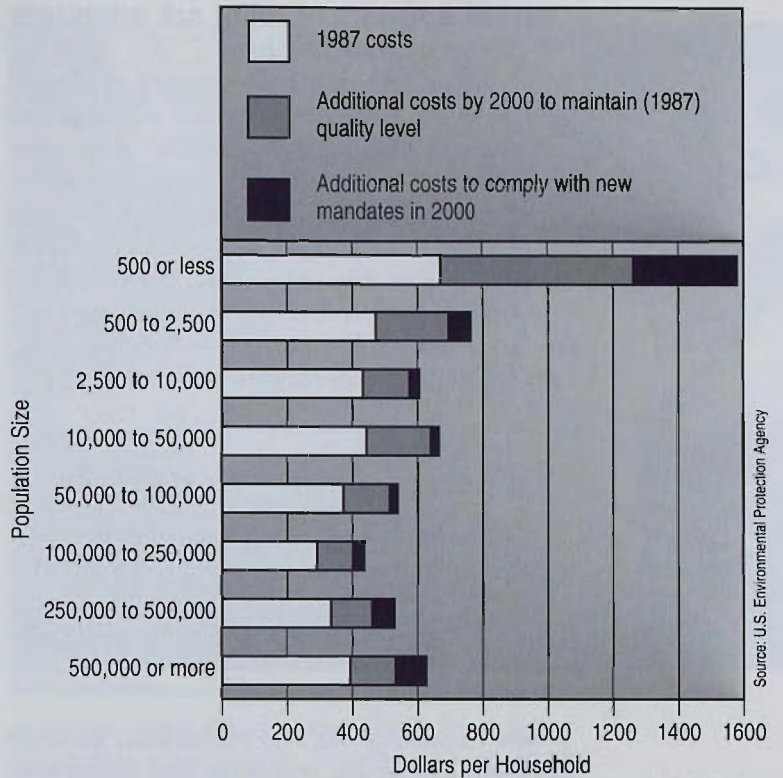


Figure 2. Annual environmental costs per household, by city size (1988 dollars)

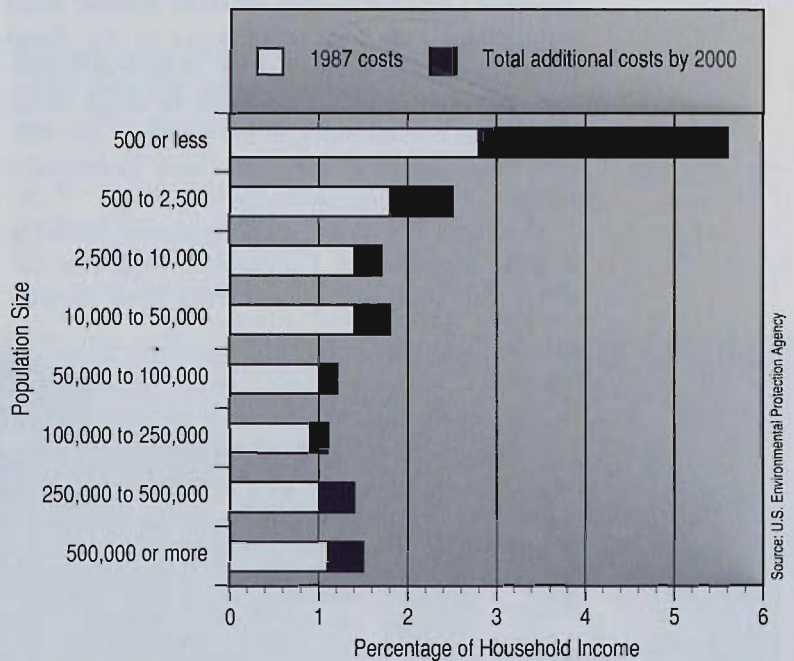


Figure 3. Annual environmental costs as a percentage of household income, by city size

small communities. Environmental costs are particularly high in areas where people live far apart, adding to the cost of water mains and sewers, and where water supplies must be purified to correct for high levels of exposure to industrial and agricultural chemicals.

Current sources of relief not adequate for some communities

While federal and state loan programs help small communities finance environmental infrastructure, sometimes at subsidized interest rates, many low-income communities do not qualify. According to the EPA, 20 percent or more of small communities will be unable to borrow funds because of their inability to meet debt obligations. In contrast, the EPA expects that less than 10 percent of communities larger than 2,500 population will have difficulty borrowing funds for these purposes.

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New technology can help reduce costs for small cities, but developing, evaluating, and testing low-cost technologies takes time. Even after the EPA approves a new technology for small systems, some states take a long time to authorize its use. Small communities are often unaware of new technologies and need technical assistance to adopt them. Most small communities do not hire even one full-time employee to oversee basic local government functions, much less environmental duties.

Existing law provides some regulatory flexibility to small communities. For example, small communities may apply for waivers from some require-

ments, but many do not know about this option. Such waivers can substantially reduce costs for small communities. However, the waivers generally provide only limited, temporary, and uncertain relief. Recently enacted federal mandate reform will make it more difficult to impose costly mandates in the future, but it does not affect existing regulations.

Various approaches can help control the growth of environmental costs

How can environmental policies be altered so that small communities can afford to maintain a clean and safe environment? Potential solutions include new or modified financial aid programs, subsidized training and technical assistance, and modified regulations to reduce small-community costs.

For example, financial aid programs could encourage small communities to collaborate and restructure their systems to achieve economies of scale. Training and technical assistance could help small-system operators adopt new technology and management practices that improve environmental quality and control costs. The adoption of performance-based standards would also help keep costs down.

The case of drinking water

The EPA estimates that drinking water supply systems cost local governments \$15 billion in 1987, almost half—45 percent—of all local government spending on environmental services. The EPA projects that drinking water costs will increase 50 percent from 1987 to 2000. According to a 1994 General Accounting Office (GAO) study, small water systems (serving less than 3,300 customers) must spend \$3 billion to comply with new federal regu-



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lations through the year 2000, which will necessitate an additional \$20 billion in spending to maintain or expand their systems. Although small water systems serve only about 11 percent of the nation's population, they will incur nearly 70 percent of the total cost of complying with drinking water requirements. In very small communities (under 500 population), annual water fees will increase \$366 per household by the year 2000, according to the EPA. In larger size communities, drinking water fees will increase only \$40 to \$70 per household.

Small systems will incur a disproportionate share of total drinking water compliance costs for at least two reasons. First, small systems comprise 87 percent of all water systems. Because many drinking water compliance activities—such as lab tests—cost about the same regardless of system size, total small-system costs can exceed total large system costs, even though small systems serve fewer customers. Second, 30 percent of all small systems currently fail to comply with drinking water standards, compared with 22 percent of larger systems. More small than large systems do not even monitor—much less treat—contaminants in their water.

More flexible federal regulations may help

In an effort to curtail these potential costs, the Senate passed legislation (S. 2019) in 1994 that would amend the Safe Drinking Water Act. The House is expected to pass similar legislation in 1995. This legislation instructs the EPA to consider both the costs and the benefits when designing new drinking water standards. The 1994 legislation would also allow states to develop more flexible monitoring programs, fine-tuned to the unique characteristics of a particular region or area. If enacted, such changes could result in more common sense, performance-based regulations for both small and large water systems.

...30 percent of all small systems currently fail to comply with drinking water standards...

Under this proposed legislation, small community systems (less than 10,000 customers) which install EPA-approved prefabricated treatment systems using best available technology receive automatic waivers which protect them from penalties if their new technology fails to meet with existing standards. The EPA also recommends that states should be allowed to give waivers to small systems



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to bypass monitoring of some already known non-threatening contaminants. Some states have already incorporated this approach, significantly reducing local monitoring costs.

States play important role in adopting cost-saving approaches

Because regulatory flexibility can reduce costs only so much, the EPA recommends that states encourage the use of other cost-saving approaches for small communities, including new technologies, operator certification programs, pollution prevention, and, most importantly, the restructuring of drinking water supply systems. Restructuring involves a variety of activities, including capital and maintenance improvements, contracting out, sharing services, and regionalization. The EPA claims that restructuring would improve compliance and help keep costs down for about half of the existing small water systems. The EPA also encourages states to monitor planned construction of new or modified water systems to insure compatibility with current and future requirements.

According to the GAO, states have been forced to defer spending on local cost-reducing activities, such as technical assistance, operator training and certification, and pollution prevention programs, to focus their limited funds on important state oversight activities involving drinking water requirements. If enacted, the federally funded, state-revolving loan program for drinking water might relieve some of this fiscal pressure. But the states must raise money for their 20 percent match for this program.

The Environmental Finance Advisory Board (EFAB) encourages states to use other cost-saving

options to help small communities. For example, federal equivalency and cross-cutting requirements, such as Davis-Bacon wage provisions that require federally funded construction projects costing more than \$2,000 to pay "prevailing" (or urban) wage rates, can add substantial, unnecessary costs in rural areas. States can avoid these costly requirements by using nonfederal funding sources, such as matching funds or loan repayment funds, to finance small community projects. States can also establish bond pools to reduce finance charges for small communities. EFAB also recommends that states create a small-community set-aside in the proposed revolving loan programs to assure that small communities get their fair share of federal funding.

Other organizations can play important roles

The National Rural Water Association and the Rural Community Assistance Program provide important technical assistance to rural communities and receive federal funds for this purpose. Organizations representing local or regional governments, such as the National Association of Towns and Townships and the National Association of Development Organizations, can help disseminate information about new cost-effective technologies. The U.S. Department of Agriculture's water and wastewater facilities programs, which fund many rural systems, can also help reduce small-system costs by continuing to subsidize loans to low-income areas and encourage cost-saving approaches appropriate to such places, such as self-help projects that use volunteer labor.

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The high price of protection

The kind of sustainable development that most communities seek requires environmental protection, but it may come at a high price to many small communities. Although federal legislation may provide some regulatory relief, environmental costs are still likely to increase rapidly for small communities. To control these costs, government agencies

and nongovernmental support groups need to speed up the implementation of cost-saving technologies and provide technical assistance to small system operators. About half of all small systems will require significant restructuring to meet quality standards at a reasonable cost. Major capital investments and new forms of funding will be required, especially for very small and low-income communities. Only through the coordinated efforts of many federal, state, and local government agencies and nongovernmental organizations will small communities be able to make these adjustments. Until this occurs, small communities will continue to see environmental mandates as ominous-looking clouds on the horizon—often with good reason, given current estimates of their costs. ■

■ For more information

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