APPENDIX H

Regulatory Needs as Water and Wastewater Funding Needs

Including regulatory needs in an assessment of the adequacy of funding for water and wastewater infrastructure may be unprecedented. However, without an adequate regulatory system, the quality of water and wastewater services will not be assured.

Anecdotal accounts and occasional published news reports suggest that regulators in the Appalachian states have unusually large needs—in other words, that their budgets, human resources, and levels of political support fall behind those in other regions of the country. For example, in 1998, citing EPA officials and a study from the magazine *Chemical and Engineering News*, Ken Ward of the *Charleston Gazette* reported that West Virginia's water-quality regulators were seriously underfunded.[1]

Confirming or refuting this suggestion of disproportionately low regulatory funding for water quality in Appalachia is difficult, if not impossible. The UNCEFC research team has attempted to assess it using three sources: data supplied directly to UNCEFC by the Environmental Council of the States (ECOS); a report, *State Environmental Expenditures and Innovations*, compiled by the National Association of State Budget Officers (NASBO) in May 2000; and an interim report by the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) in April 2002.[2]

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[1] Ken Ward, "Regulators Lacking Funds: EPA Upset," *Charleston Gazette*, January 25, 1998.

[2]National Association of State Budget Officers, *State Environmental Expenditures and Innovations* (Washington, D.C.: the Association, May 2002), available at www.nasbo.org/publications/infobriefs/enviro_expend2000.pdf; Association of State and Interstate Water Pollution Control Administrators, *State Water Quality Management Resource*

The ECOS data are the longest kept, most comprehensive, and most up-to-date. The NASBO report collected data from all states except Texas, but only for fiscal year 1998. Because of the huge problems in comparing categories of spending across states and because of the year-to-year variability in states' budgets for environmental programs, the NASBO report has limited usefulness for testing the hypothesis that Appalachian states' programs are underfunded. ASIWPCA used an interesting methodology in its report: it built a model to estimate the actual needs for a well-run water regulatory program, and then it compared actual expenditures using NASBO data with the estimated needs. However, at the time of the ASIWPCA report, only twenty-two states had submitted complete or near-complete information, and there is no indication that ASIWPCA intends to finalize its model or its comparison in the near future.

The problems of data quality aside, the ASIWPCA report estimated a large gap ($735 million–$960 million) between national water-quality regulatory needs and resources. The implication of the ASIWPCA analysis is that states are receiving less than half of the resources they need to implement fully the requirements of the federal Clean Water Act. Further, some particular categories of need, such as monitoring, appear to be grossly underfunded nationally. This finding again calls into question the ability to make judgments about ambient water quality in the nation as a whole or in a region such as Appalachia. What is not known and not being monitored dwarfs what is known and being monitored.[150]

The ASIWPCA report does not make its data for individual states available. In any event the percentage of states responding probably precludes drawing definitive conclusions about the relative gap in regulatory funding in

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Analysis: Interim Report on Results (Washington, D.C.: the Association, April 1, 2002), available on file at UNCEFC.

[150] ASIWPCA, *State Water Quality Management Resource Analysis*.

Appalachia. Furthermore, ASIWPCA relied primarily on NASBO spending data, which are limited to one fiscal year. The NASBO data are broken out regionally and by states, but what exactly is counted as a "water management program" in each state is unclear.

Taken at a glance, NASBO numbers for the Appalachian region do not look significantly lower than national averages, but the huge variance between states inside and states outside the region makes the comparison suspect. For example, Virginia is credited in the NASBO report with $100.6 million in total spending on water management programs, exceeding every other state except California ($757.4 million) and Illinois ($190.1 million). Most water-quality specialists would be surprised to find that Virginia is actually outspending Florida ($69.2 million in the NASBO report). Similarly, South Carolina is credited with $25.4 million in spending and North Carolina with $10.6 million, but North Carolina has a significantly larger water-quality staff and a significantly larger number of permits to handle. In short, the NASBO report does not appear to be a reliable way to compare state spending on environmental programs.

The UNCEFC research team has analyzed the ECOS data in some detail, but the answer to whether Appalachian states underfund water regulation compared with non-Appalachian states still is elusive. States categorize spending differently, so the numbers allocated to "drinking water," "water quality," and "water resources" (the categories used by ECOS) simply cannot be compared state to state. For example, Florida includes drinking water in its numbers for water quality, and West Virginia includes water quality in its numbers for water resources. Also, the West Virginia numbers for water resources are very high (relative to those in the NASBO report), suggesting that other programs (maybe coal mine rehabilitation) may be included. In the ECOS data, West Virginia (rather than Virginia, as in the NASBO data) is an outlier for spending.

The UNCEFC research team constructed two methods for interpolating missing data values for particular water programs. Method 1 used national averages for allocating expenditures among categories when a state chose to lump them, and method 2 excluded states that reported no spending in a particular category. Using method 1, per capita regulatory spending on drinking water, water quality, and water resources in the Appalachian states may or may not be significantly less than per capita spending in the non-Appalachian states (see Table H-1). It depends on whether one includes the (outlier) data from West Virginia. Using method 2 suggests that there is significantly less spending per capita on water regulation in Appalachia than elsewhere.

Table H-1. Per Capita Spending Using Methods for Interpolating Missing Data Values

Per Capita Spending for Drinking Water, Water Quality, and Water Resources, Fiscal Year 2003	**Method 1**	**Method 2**
Non-Appalachian states	$22.55	$ 24.08
Appalachian states, **including** West Virginia	22.15	14.14
Appalachian states, **excluding** West Virginia	12.49	13.05

Since the methodology drives the result, the UNCEFC research team cannot definitively say that Appalachian states' water programs are significantly underfunded relative to other states. Further research might tease out this relationship. A per capita measure may not be the appropriate measure. A better measure might be "per stream mile" or "per NPDES permit" (National Pollution Discharge Elimination System permit).

A final comparison from the ECOS data, however, suggests that there may be a significant difference between environmental budgets inside the region and environmental budgets outside it. Comparing per capita spending for all

environmental programs in fiscal year 2003, the UNCEFC research team found that Appalachian states (including West Virginia) spent $53.17, while non-Appalachian states spent $79.97. If West Virginia is excluded from this analysis, the gap between Appalachia and the rest of the country widens further: $40.03 for the Appalachian states other than West Virginia, still $79.97 for the other states of the nation.

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