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AN EXAMINATION OF ALTERNATIVE INSTITUTIONAL ARRANGEMENTS
FOR REGULATING SMALL WATER UTILITIES IN OHIO: AN ABRIDGEMENT

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PREFACE

The difficulty in regulating a large number of water utilities - many of them small - has long confronted state public utility commissions. This report was prepared on this subject under contract to the Ohio Public Utilities Commission. Chairman Thomas V. Chema of the PUCO has generously made available the results of our report for dissemination to our full clientele.

I believe you will find it of interest.

Douglas N. Jones
Director, NRRI
Columbus, Ohio
February 15, 1989

EXECUTIVE SUMMARY

The Ohio Public Utilities Commission was handed a difficult task in 1988: how to regulate an estimated 700 water utilities put under the Commission's jurisdiction by a change in state law.

The task is a big one, and not simply because the number of jurisdictional water companies jumped almost fourteen-fold with the change in state law. The task is difficult because many of the state's water companies have serious financial troubles; troubles mirrored nation-wide.

The causes of small water utilities' financial troubles often stem from unskilled management, inadequate rates, antiquated equipment, insufficient customer bases, and questionable credit worthiness that discourages bankers from lending money for system improvements. The effect is that systems, service, and water quality deteriorate.

Ohio already has taken steps to reverse this downward spiral by instituting training programs, simplified rate filing procedures, and by publishing bookkeeping manuals and newsletters. To date, these tools have been available to jurisdictional water utilities only. The remaining seven hundred or so water systems newly subjected to PUCO regulation now must be considered, too.

Other states have successfully used techniques similar to Ohio's to deal with their water utilities. Many of their efforts were initiated by staff and subsequently were adopted as formal administrative rules of the commissions. Other efforts were in response to statutory directives. Ohio would have to decide which of these techniques is best for its purposes. Several states--most notably California, Illinois, West Virginia, and Florida--have moved to encourage system consolidation. Typically, small, unstable utilities merge their operations with larger, more secure entities. Illinois, in particular, has enjoyed success, cutting the number of water utilities it regulates from 150 a decade ago to about eighty today.

In addition, many states exempt from regulation water companies whose customers are tenants, as in mobile home parks, nursing homes, and apartment complexes. The rationale for exempting these entities is that they are not "public" utilities, but count water as one of several services included in rent. Many states also exempt from regulation companies based on the size of their customer base or annual revenues. Such limits may be justified when the cost of regulation is compared with the benefits that accrue to a small number of customers.

The PUCO has four principal strategies it may choose to pursue: strategies that exempt the smallest systems from regulation, strategies that

train and assist system operators, strategies that consolidate systems, and strategies that explore alternative methods of regulation.

Of these, the most effective may be system consolidation. Several benefits result, the most important of which is improved access to capital and technical expertise. Also, system improvements may become easier to make once costs are spread more widely. This should lessen rate shock when higher rates are imposed to pay for system enhancements. Finally, management may improve as the larger-sized utility is able to attract professionals trained in operating a utility. This likely would make regulation easier.

As a drawback to consolidation, the first few years after a merger may be difficult as regulators and utility executives wrestle with questions of equitable rates and system improvements. Rates initially may rise for consumers, but higher rates may be outweighed by improved management, reliable service, and enhanced water quality.

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CHAPTER 1
THE PROBLEM OF SMALL WATER UTILITIES IN CONTEXT

An estimated 35,000 utilities supply water to 200 million residential customers in the United States, plus industrial and commercial users. Most Americans get their water from large utilities, which tend to be municipally owned. Such systems supply water to 84 percent of those served by central water systems.

Privately-owned companies provide water to the rest of the population served by central water systems. Such firms make up 44 percent of all water systems in the country, yet serve only 16 percent of those connected to central water systems. These systems often are in rural or suburban locations and provide water to mobile home parks, nursing homes or housing developments.¹ As a result, the companies have relatively few customers and often are owned and operated by real estate developers who build in formerly rural or suburban areas.

Small water companies share similar operating characteristics. Their owners tend to be inexperienced at running a utility, often because the systems are secondary to their chief business, usually real estate. Many water systems operate with inadequate revenues, caused by their owner's reluctance to raise rates. Such reluctance may stem from fears that high water bills could stifle real estate sales, or spark hostile reactions from friends and neighbors who are on the system. Either way, inadequate rates result, leading to deferred or neglected maintenance and increasingly unprofitable operations.

¹ Patrick C. Mann, Water Service: Regulation and Rate Reform (Columbus: The National Regulatory Research Institute, November 1981), pp. 2-8.

Ohio's Situation

Ohio has more than 1,600 water systems, an estimated 750 of which may now be under Commission auspices under amended sections to the Ohio Revised Code. Another 850 remain exempted from Commission jurisdiction by Ohio statute because they are "owned and operated exclusively by and solely for the utilities' customers".² Of these 850 systems, more than 400 are run by incorporated villages, 112 by counties and 180 by cities. Another 120 are operated by homeowner's associations. The rest are run by water authorities, trusts, the state of Ohio, water associations or the federal government. A handful are operated by unknown entities.³

The amendments to the Ohio Revised Code may have been prompted by the apparent attempt by several financially troubled water companies to avoid Commission regulation by filing for non-profit status. Such status previously was exempt from regulation. Alarmed that regulation would end, customers of the systems urged the Ohio General Assembly to amend the Ohio Revised Code. The revision, Amended Substitute Senate Bill No. 337 ended the exemption for Ohio's non-profit utilities and increased the number of companies subjected to Commission regulation.

More than half of the systems are in the state's northeast and northwest counties while less than 10 percent are in its southeast counties. (See table 1-1.) In addition, most of Ohio's water systems share at least one characteristic: they are small. More than one-half serve fewer than 100 customers and 91 percent pump less than 50,000 gallons of water a day. More than one-half produce 10,000 gallons a day or less. Only 8.8 percent of the systems pump more than 50,000 gallons of water a day. (See tables 1-2 and 1-3.)

Fully two-thirds of the state's systems serve mobile home parks. Another 10 percent provide water to nursing homes. Eight percent serve generally small residential subdivisions and apartment and condominium

² Ohio Revised Code sec. 4905.02 subsec. B.

³ Ohio Environmental Protection Agency, Special Model State Information System Report: Telephone Listing of Active Community and Active Non-Community ICC, (Columbus: Ohio Environmental Protection Agency, undated).

TABLE 1-1

Type of Investor-Owned Water System By District

<u>Ohio EPA District</u>	<u>Type of System</u>				
	Mobile Home Park	Nursing Home	Apartments/ Condominiums	Residential Subdivision	Other
Southeast	59.7%	17.9	4.5	6.0	11.9
Southwest	74.8%	5.4	7.2	0.9	11.7
Northeast	58.3%	14.6	8.9	2.0	16.2
Northwest	69.9%	8.5	3.3	2.6	15.7
Central	72.6%	7.1	3.5	0.0	16.8
Average	67.1%	10.7	5.5	2.3	14.5

Source: Adapted from data contained in Ohio Environmental Protection Agency, "Special Model State Information System Report," (Columbus: Ohio Environmental Protection Agency, undated).

TABLE 1-2

Size Distribution of Population Served by Ohio Investor-Owned Water Utilities
By District

<u>Ohio EPA District</u>	<u>Population</u>						
	0-50	51-100	101-500	501- 1000	1001- 10,000	10,001- 50,000	50,000+
Southeast	25.8%	33.3	30.3	3.0	7.6	0.0	0.0
Southwest	18.9%	25.2	46.8	7.2	0.9	0.9	0.0
Northeast	19.4%	25.5	45.3	5.7	2.8	0.4	0.8
Northwest	23.5%	23.5	45.1	3.9	13.0	2.0	0.7
Central	24.8%	26.5	36.3	5.3	5.3	1.8	0.0
Average	24.5%	26.8	40.8	4.5	5.9	1.0	0.3

Source: Adapted from data contained in Ohio Environmental Protection Agency, "Special Model State Information System Report, (Columbus: Ohio Environmental Protection Agency, undated).

TABLE 1-3

Size Distribution of Daily Production by Ohio Investor-Owned Water Utilities
By District

<u>Ohio EPA District</u>	<u>Daily Production in Gallons</u>						
	0-1000	1001- 10,000	10,001- 50,000	50,001- 100,000	100,001- 500,000	500,001- 1 million	1 mil. and up
Southeast	4.5%	60.6	27.3	4.5	0.0	1.5	1.5
Southwest	0.0%	49.5	43.2	5.4	0.9	0.0	0.9
Northeast	4.0%	50.2	38.1	4.5	0.8	0.4	2.0
Northwest	1.3%	46.4	44.4	3.9	1.3	0.0	2.6
Central	0.8%	44.2	41.6	8.0	1.8	1.8	1.8
Average	2.1%	50.2	38.9	5.3	1.0	0.7	1.8

Source: Adapted from data contained in Ohio Environmental Protection Agency, "Special Model State Information System Report," (Columbus: Ohio Environmental Protection Agency, undated).

developments while the remaining 15 percent serve other types of customers; even whole towns and counties.⁴

The Financial Straits of Ohio's Small Water Companies

Many of Ohio's privately-owned water utilities have financial problems. Companies with any of four red-flag characteristics "have a tendency" to develop some kind of operating or financial difficulties, according to a March 1988 report on the problems of small water and wastewater companies by the PUCO's Energy & Water Division.⁵ The red-flag signs are (1) a customer base of fewer than 500, (2) a net income loss for 1986, (3) combined water and wastewater sales of less than \$50,000, and (4) total plant in service valued at between \$50,000 and \$500,000.

Key Operating Ratios Indicate Problems

Almost two-thirds of the Commission-regulated utilities included in the PUCO report had a "negative profitability," meaning they had been losing money "over the long run."⁶ Such financial troubles can lead to a negative earnings account, which stifles a company's ability to pay dividends and make capital investments. With retained earnings lacking or nonexistent, a company may use its invested capital to pay for these functions. The report suggests that using invested capital this way, however, may cause a company to deplete its financial cushion to pay for unforeseen expenses.

Ohio's unprofitable investor-owned water companies used as much as 96 percent of their revenues to pay variable costs, the report said.⁷ The remaining revenues paid for fixed costs and provided a meager, direct profit. Such a high percentage is indicative of an inefficient operation. By contrast, Ohio's profitable investor-owned water companies operated with

⁴ Ohio EPA, Special Model State Information System Report.

⁵ Sue Daly, "Report on Specific Problems of Small Water/Wastewater Companies" (Inter-Office Communication, Energy and Water Division, March 17, 1988), p. 1.

⁶ Ibid.

⁷ Ibid., p. 2.

an average 66 percent "asset efficiency" ratio. The PUCO report suggested that the high ratios reported by the unprofitable companies were caused by (1) their failure to control expenses, (2) fixed expenses that were too large to be recovered through sales, and (3) poor forecasting.

Turning to a measure of asset turnover (dollars in sales for each dollar of company assets) the report found profitable and unprofitable companies had ratios of -.0021 and .0233, respectively.⁸ Values generally are low because the capital intensive nature of the water industry. Higher values are an indication that a "good return on investment" is being earned, the report said. Any advantage that profitable companies may have had resulted from smaller asset accounts, the report said.

For example, more than half the unprofitable firms had asset turnover ratios that were below the lowest turnover ratio reported by the profitable group. The report suggested that improvement in this ratio could come either from increased revenues (generated by higher rates or more customers) or from a cut in the amount of assets on a company's books.

The PUCO report also said that 69 percent of the Ohio companies examined had a customer base that was too small. "It is from the low values here that many of the problems originate," the report said.⁹ For example, a small customer base combined with the large fixed costs typical of a water distribution system may cause higher bills, limited revenues, and the loss of economies of scale. "Combine the low sales potential with inefficient equipment and. . .the average company cannot recover the revenues required to survive. . . ."

⁸ Ibid. The report pointed out that while two utilities had high asset turnovers, suggesting a good return on investment, the way the ratio was achieved "ultimately destroys any potential profits." Both companies operated with a small dollar amount of assets on their books, the result of operating with old equipment that had been depreciated more than 55 percent. "This results in a small asset account but only at the cost of operating with obsolete equipment," the report said.

⁹ Ibid., p. 3.

Utility Financial Problems in Some Other States

Nationally, small water systems often are built by developers who have little experience managing a utility. The Florida PSC staff has noted that new water utilities are related to new residential or commercial development. This relationship can cause problems. When regulated and unregulated companies have common ownership or control "cross subsidies that distort the cost-price relationship" may occur.¹⁰

Furthermore, small investor-owned water companies often are not professionally run. At best, they may have only a part-time manager. Furthermore, the systems often are under-capitalized and have spotty record keeping, poor service records, and low profitability.

Such traits can quickly cause operating problems. For example, a recent Florida PSC staff report found that Florida's bankers generally balked at lending money to water and sewer systems because they could not readily be sold for cash after a default. Equally troubling, the banks could find themselves running the water company if a buyer could not be found after a default.¹¹

Florida's situation is repeated in Vermont, where small water companies are in "terrible" financial shape, according to one Vermont staff member.¹² Most of Vermont's water utilities are rural and "tiny, I mean real small," the staff member said. Vermont's largest system has 1,000 customers; most serve ten to twenty customers. In Ohio, by contrast, the largest systems serve more than 50,000 people, although 92 percent serve populations under 1,000. Most of Vermont's small water companies are financed out of the owner's pockets, the staffer explained. As in Florida, Vermont's companies tend to be unprofitable so bankers are reluctant to lend money for capital improvements. When loans are approved, an owner's personal guarantee frequently is required on mortgage notes.

¹⁰ Florida Public Service Commission, Initial Rates for a New Water Utility, undated, p. 2.

¹¹ R. Lynn Adams, Report on Contributions-in-Aid-of-Construction (Tallahassee: Florida Public Service Commission, 1988), pp. 18-20.

¹² Interview with Ray Koliander, Chief of Rates and Tariffs, Vermont Public Service Division, July 1988.

CHAPTER 2
INTERVENTION TO AVOID CRISIS

The problems of small water companies are not limited to Ohio, Florida and Vermont. Commissions nationwide face similar problems and have adopted a variety of procedures to address them.

Unlike the situations where massive and detailed data sets exist that describe jurisdictional electric, telephone, and gas utilities, data on water utilities is lacking. This is especially true for the small water utilities as well as for the not-for-profit central water providers, such as nursing homes. Accordingly, information provided to the NRRI during the course of the study did not include detailed information about service territories, production modes, or customer types. Stated simply, the detailed information on small water utilities did not exist in the surveyed states.

Information has, however, been furnished by the technical staff of the surveyed commissions regarding alternative institutional regulatory mechanisms. Technical staff in all states surveyed also were able to describe in a consistent manner the problems the approaches were designed to resolve (such as the disproportionate cost of rate filings) giving added confidence to the reliability of their qualitative, professional observations.

Typically, a commission's intervention to control a troubled utility may occur at any one of several stages as figure 2-1 shows.¹³ The figure shows the major type of action that a commission might take to deal with the

¹³ A detailed but dated discussion of these intervention techniques is found in Raymond W. Lawton and Vivian Witkind Davis, Commission Regulation of Small Water Utilities: Some Issues and Solutions (Columbus: The National Regulatory Research Institute, 1983), pp. 65-108.

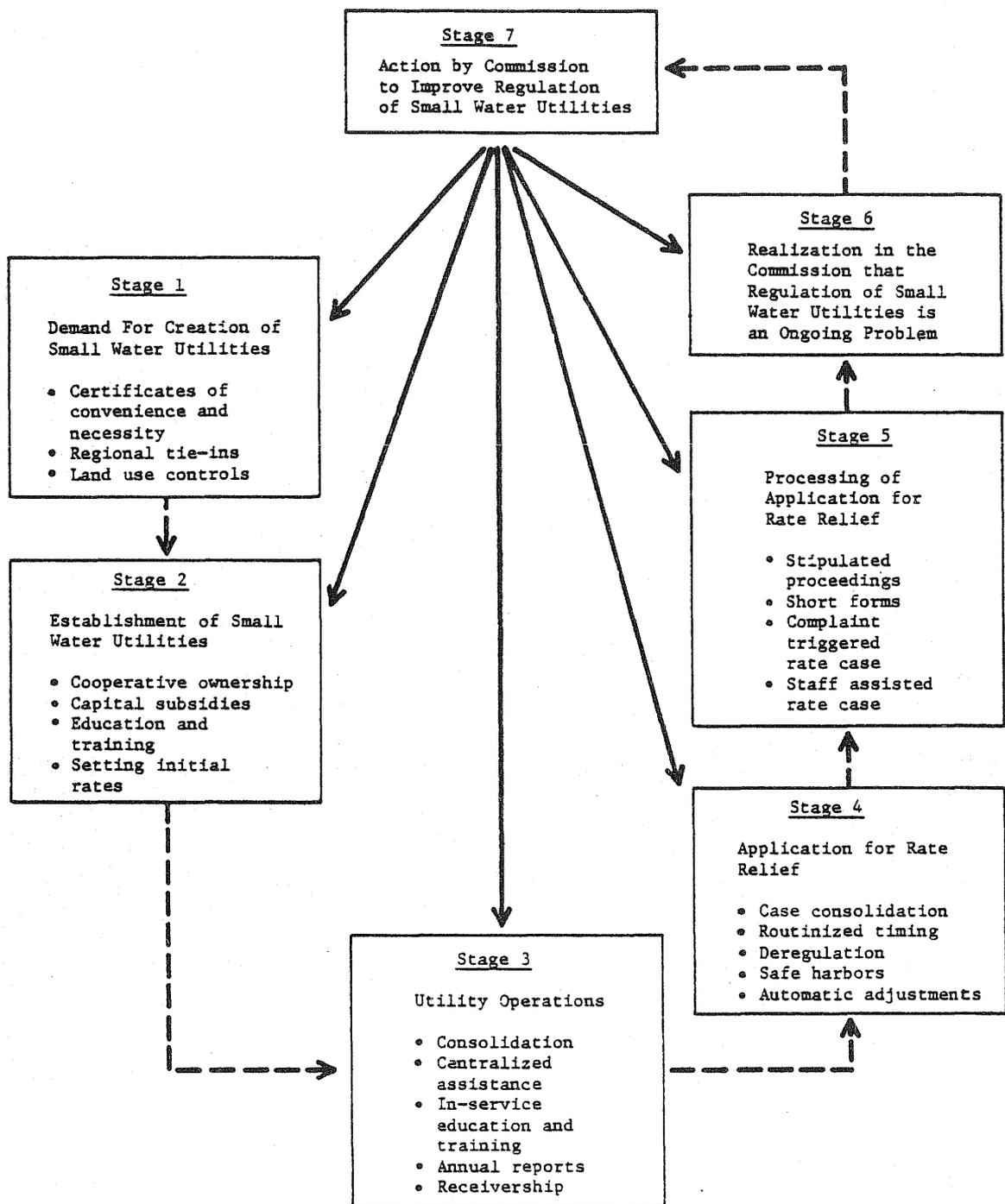


Fig. 2-1 How Commissions Can Deal With Problems of Regulating Small Water Utilities

Source: Raymond W. Lawton and Vivian Witkind Davis, Commission Regulation of Small Water Utilities: Some Issues and Solutions (Columbus, Ohio: The National Regulatory Research Institute, 1983), p. 67.

financial, technical, and managerial problems of small water utilities. The "stages" of the figure can be viewed as intervention points at which a commission can act to prevent or ameliorate difficulties. Interviews with commission staff members suggest that intervention strategies frequently are undertaken initially by staff, sometimes on the basis of their interpretation of state statute. These initiatives later may be adopted formally by the commission.

Controls Before Certification

One control is deregulation, which could relieve a commission from regulating small utilities altogether. Control need not be expressed, however, through complete deregulation. It could take the form of any one of a number of relaxed regulatory modes. This could range from relying on oversight monitoring, indexing of some kind to complaint-initiated proceedings.

Deregulating water utilities may be acceptable if (1) the price for water is perceived as fair, (2) the cost of regulation is unacceptably high, (3) the utility is small, (4) substitutes are available (such as bottled water), (5) adequate regulatory safeguards exist through other institutions, and (6) existing law and policy support deregulation.

Florida, for example, lets each of its counties decide whether or not it wants to be regulated by the Public Service Commission. Of the state's 67 counties, 33 are regulated by the Florida commission. Among the more populous counties, Dade County (Miami) maintains home rule.¹⁴

Other states have taken a different approach, deregulating or exempting from regulation companies based on their size or type of customer served. Michigan, for example, regulates only those companies that have more than 75 customers.¹⁵ Another 14 states have set minimums for the number of customers a water or sewer utility must serve to be regulated. These

¹⁴ Interview with John Williams, Florida Public Service Commission, August 1988.

¹⁵ Interview with William English, Public Utilities Engineer Specialist, Michigan Public Service Commission, September 1988.

standards suggest that systems with fewer than fifty to 100 customers are considered small enough to be exempted from regulation. Florida water utility representatives suggested that fifty customers are "too few to support a viable operating company" and that about 500 customers may be the minimum size needed for a profitable operation.¹⁶

If Ohio were to regulate only those companies with more than 100 customers, approximately 300 fewer utilities could be subject to commission regulation.

In other states, system type is used to guide the scope of commission regulation. Illinois, New York, Indiana, and West Virginia exempt from regulation rules systems that operate on an owner-to-tenant basis (as in trailer parks, nursing homes, or apartment complexes). In other words, as long as just the cost of water is passed on to customers in rental rates, the transaction is not regulated.

As an alternative to deregulation, a commission may choose to intervene when real estate initially is developed, but before water service is extended. Land use controls (including denying a certificate of convenience and necessity to a developer preparing building sites) and the consolidation of existing water utilities can halt the creation of new water utilities. Simply stated, where small water utilities do not exist, they cannot cause themselves (or the regulatory commission) problems.

For more than a decade the Illinois commission staff has tried to discourage the creation of water utilities through the use of state statutes that require transactions between utilities to be approved by the Commission. Staff's interpretation of these statutes has led it to encourage developers to link new subdivisions to existing systems (either investor-owned or municipally-operated), or to form mutuals or water cooperatives, both of which are exempt from regulation by state law. Entities that sell water to themselves or to tenants--such as nursing homes and industrial parks--are unregulated in Illinois because they do not hold themselves out to the general public as a utility. Through the Illinois staff's efforts, the number of water and sewer utilities under Commission

¹⁶ Florida PSC, Initial Rates, p. 5.

jurisdiction has fallen from about 150 in the mid-1970s to approximately eighty today.¹⁷

Similarly, the California commission passed a resolution ten years ago adopting a policy of denying new certificates of convenience and necessity for privately-owned water companies thought unlikely to survive economically. Under the Commission's action, an applicant must prove that present or future customer demand exists for the service and that no other entity is willing and able to serve the area. To gauge a company's expected viability, the Commission checks that proposed revenues do not greatly exceed those in comparable service areas. The Commission also looks for evidence that the utility will be self-sufficient and will have a reasonable opportunity to earn a fair return on the investment.

Controls to prevent or limit the formation of new utilities can be expensive, both in political and economic terms. Putting a check on land development may be politically difficult, especially when the economical delivery of water appears to be the only hurdle. What's more, tie-ins to existing municipal or investor-owned water utilities frequently are not economically justified because of the expense of building line extensions. A tie-in to an existing system may be cost effective over the long-run, however, especially if expenses fall because of the new joint operation. For ratepayers, the long-term cost of these efforts may break even. The strategy may be cost-effective for the commission on a long-term basis, particularly if the number of new systems is curtailed.

If Ohio were to consider adopting an approach similar to California's, regulators may need to weigh the need for enabling legislation and for an outreach program to inform local land regulators of the policy. Ohio has a strong home rule tradition that may impede any statewide land-use controls.

¹⁷ Interview with Thomas Stack, Assistant Director of Rate Design, Public Utilities Division of the Illinois Commerce Commission, July 1988.

Controls to Prop Up an Ailing Company

Commission intervention may occur at a second stage when water companies are established but are under-capitalized or too small to support an adequate management structure. To revive a company at this stage, a commission may consider capital infusions, improved managerial skills through training or pooling, and shared management. To the extent such steps are achieved, other problems--including low revenues, poor financial record keeping, poor service and declining plant--could be avoided.

Training programs are expensive to implement, although their costs tend to diminish with time for both commission and utility. As a benefit, training programs impose low long-term costs on ratepayers.

One popular tool in addressing a new water utility's financial losses is the use of contributions-in-aid-of-construction. CIAC are one-time charges levied on new customers upon initial connection to a utility system. The fees make newcomers pay for any additional plant needed to serve them. CIAC help ensure that existing customers do not bear the cost of new utility plant needed by new customers. CIAC often are seen as an indication that existing customers are unwilling to pay for infrastructure improvements required for new customers.¹⁸

Programs such as these require a commission's commitment of programmatic resources and funds. Ohio regulators would have to decide if the cost of such programs were lower than, equal to, or greater than their expected benefits. As a plus, strategies that include training programs are tools that have proven effective in Ohio and elsewhere.

The Connecticut Department of Public Utility Control in 1988 ordered a utility to sell its operations to another for \$4,800 because of financial troubles and a deteriorating system. The troubled system served fifty-one seasonal customers and was placed into receivership by utility and health regulators in May 1988. In late September, the Department ordered it sold to a neighboring water utility, which will spend more than \$445,000 to rebuild the ailing utility's entire system. In ordering the sale, the Department had to address issues that included setting the system's value,

¹⁸ Adams, Report on Contributions-in-Aid-of-Construction, pp 7-9.

deciding equitable rates and charges, and redeploying management. Clearly, the expense and complexity of finding a solution to save water service for just 51 seasonal customers will be enormous.

Controls When Rate Cases Are Filed

At a third stage of intervention, a commission may step in when a rate case is filed. Even then, it may be able to do little more than apply a band-aid to a hemorrhaging company. According to the PUCO report, for example, only six of 21 companies that reported losses in 1985 filed for rate increases in 1986. In two cases cited by the report, Commission-approved rate hikes imposing "fair rates" on ratepayers still left the companies with net operating losses in the thousands of dollars.

The failure of water utilities to file timely rate cases is not a problem limited to Ohio. In West Virginia, where the Commission's Public Service Division was directed by statute to study ways to consolidate many of the state's small water companies, the staff found the lag between rate cases for most companies averaged five years. And in Alabama, a water utility serving 105 customers operated with the same rates for 24 years before filing for a rate increase last July. Despite the increase, the company still expected to lose \$6,384.

With an unprofitable company, a commission has a wide range of alternatives from which to choose.

One action could be requiring more frequent rate case filings. Florida has a policy of encouraging utilities to examine their costs of providing service. To qualify for a staff-assisted rate case, a water utility must have annual revenues under \$100,000, or, for a combined water and sewer district, annual revenues of less than \$200,000.

Other states, while not soliciting rate cases outright, help analyze the adequacy of existing rate structures and the effect of various cost factors. Many of these states, including Ohio, have simplified procedures and short forms for rate case filings, and have encouraged the use of stipulated proceedings. Such programs appear to have both short- and long-term benefits for the commission, utility, and ratepaying public.

The New York Commission, for example, allows a short-form filing for any utility seeking rate increases of less than \$100,000 or 2.5 percent of its revenues.¹⁹ Commission staff's role is to recommend approval of or changes to the rate increase request. New York's procedure takes about 90 days to complete, a considerable shortcut considering the 10-months typically needed to litigate most large rate cases.

The West Virginia Commission has adopted a short-form application for companies with annual revenues below \$200,000. Upon filing, Commission staff audits a company's books and prepares the documentation needed to justify a rate hike. The process of reviewing the sometimes chaotic books can be frustrating for the Commission auditors who, in the words of one, like "square corners on the beds." Compared to the cost of letting many of the state's water systems deteriorate from a lack of regulatory oversight "it's almost more expensive" not to provide the technical assistance, observed Amy Swann, director of the Public Service District Division.²⁰

Another rate-case intervention strategy is to use a "safe harbor" approach to ratemaking. Under this technique, as long as a utility's rates or other financial and operating characteristics stay within proscribed limits, it may operate free from commission intervention. When consumer complaints become excessive or when rates, profits, or rate increases lead or lag those guidelines, the commission may take corrective action. Safe harbor arrangements may be costly to implement, but provide ongoing benefits both to the utility and the commission.

¹⁹ Interview with Robert Mulligan, Director of Water Division, New York Public Service Commission, July 1988.

²⁰ Interview with Amy Swann, Director of the Public Service District Division of the West Virginia Public Service Commission, July 1988.

CHAPTER 3
OHIO'S STRATEGY

To date, the PUCO's efforts at dealing with the state's jurisdictional water utilities can be characterized more as an ad-hoc collection of strategic in-house initiatives than as a formal Commission policy.

Nevertheless, since 1986 the two-person staff of the Commission's Energy and Water Division assigned to water has implemented a number of tools to cope with the problems of water utilities. Staff also has participated in intergovernmental activities, most notably the Interagency Groundwater Advisory Council, which includes representatives of the Ohio Environmental Protection Agency, the Ohio Department of Natural Resources, and the Ohio Department of Health. The tools staff has put into use since 1986 include financial review, outreach, training, and mapping and consolidation programs.

The financial review program already has been introduced briefly in chapter 2 in the discussion of "red-flag" trouble indicators for the state's jurisdictional water utilities. During the past three years, staff has reviewed the annual reports of each of the state's jurisdictional water utilities with an eye toward finding signals that may mean a company is having financial troubles. Red-flag indicators are (1) a customer base ranging from zero to 500, (2) a net income loss for the previous year, (3) total water and wastewater sales of less than \$50,000 during the previous year, and (4) total plant in service ranging from \$50,000 to \$500,000.

With this knowledge, staff has divided the state's water companies into three groups by computing each company's asset utilization ratio (net operating income/total assets). Once the companies are split into groups, staff prepares an outreach program aimed at assisting first those firms whose financial conditions are the "worst of the worst." Outreach includes on-site training programs to address regulatory and administrative problems such as tariffs, billings, and bookkeeping. The first on-site training

sessions began in October 1988. As an extra training tool, staff has developed a three-volume manual to help small water and sewer companies develop and maintain an effective bookkeeping system. The manual provides basic accounting requirements and offers suggestions for record keeping.

As an additional outreach tool, staff has begun distributing a newsletter to all jurisdictional water companies. The newsletter explains PUCO filing requirements, changes in policy and rules, and other information. The first issue was mailed in August with future issues expected on a semi-annual basis.

Besides these review, training, and outreach efforts, a mapping project is underway aimed at facilitating the possible consolidation of financially troubled jurisdictional water companies. The project locates the state's jurisdictional water companies on a map and establishes their proximity to one another (see figure 3-1). This information becomes important during the second step when potential consolidation candidates are identified. During this step, staff relies on data gleaned from its review of annual reports. Nearby utilities that may be potential consolidation partners are identified.

As shown in figure 3-2, a consolidation partner may be a jurisdictional or a nonjurisdictional water company. In addition, other utilities such as rural electric cooperatives, are identified. These companies, too, may be able to take over the operations of a troubled water company. Information such as the population served by the potential consolidation partners and their distance from the troubled water utility is included in the staff's consolidation matrix.

As a final tool, simplified procedures are available for Ohio rate case filings. For water and sewer utilities with 2,500 or fewer customers, an abbreviated form is available. The short form is designed to provide a simplified and less expensive procedure for requesting rate increases. The

Public Utilities Commission of Ohio



REGULATED SEWER AND WATER COMPANIES

NUMBER	NAME	(COUNTY)
1.	ARROWHEAD	(SHELBY)
2.	BRIMFIELD	(PORTAGE)
3.	CAMPLAND	(ASHTABULA)
4.	CHOCTAW	(MADISON)
5.	CHRISTI	(DEFIANCE)
6.	COPELY	(SUMMIT)
7.	COUNTRY CLUB	(GREENE)
8.	EAGLE CREEK	(HANCOCK)
9.	FAIRLANE	(PORTAGE)
10.	GEM BEACH	(OTTAWA)
11.	HOLIDAY	(HURON)
12.	IMPETIAL	(RICHLAND)
13.	LAKE BUCKHORN	(HOLMES)
14.	LAKE ERIE	(OTTAWA)
15.	LAKE WHITE	(PIKE)
16.	LAKELAND	(FRANKLIN)
17.	LAKENGREN	(PREBLE)
18.	LORELET	(BROWN)
19.	MADISON	(RICHLAND)
20.	MARK V	(ALLEN)
21.	MASURY	(TRUMBULL)
22.	MCHAWK	(CARROLL)
23.	NORLICK	(WILLIAMS)
24.	NORTON	(SUMMIT)
25.	OA-TIFFIN	(SENECA)
26.	OA-MARION	(MARION)
27.	OA-LAWRENCE	(LAWRENCE)
28.	OA-ASHTABULA	(ASHTABULA)
29.	OHIO SUBURBAN	(MONTGOMERY)
30.	OU-HUBER	(FRANKLIN)
31.	OU-BLACKLICK	(FRANKLIN)
32.	OU-LAKE DARBY	(FRANKLIN)
33.	OU-TIMBERBROOK	(FRANKLIN)
34.	OW-MARYSVILLE	(UNION)
35.	OW-ERIE WEST	(LAKE)
36.	OW-STRUTHERS	(MAHONING)
37.	OW-WASH. C. H.	(FAYETTE)
38.	OW-ERIE EAST	(ASHTABULA & LAKE)
39.	OW-MASSILLON	(STARK)
40.	OLD ORCHARD	(LAKE)
41.	SANDELMWOOD	(PORTAGE)
42.	SENECA	(WILLIAMS)
43.	SHARON	(ALLEN)
44.	SHANNEE HILLS	(GREENE)
45.	SHEPARD HILLS	(SUMMIT)
46.	TOLCO	(CUYAHOGA)
47.	TOMAHAWK	(COLUMBIANA)
48.	VALLEY	(FRANKLIN)
49.	VALLEY WATER	(GREENE)
50.	WALNUT CREEK	(HOLMES)
51.	WESTERN OHIO	(CUYAHOGA)
52.	WOODBURN	(CUYAHOGA)

LEGEND
 A1 - 15,000 or more customers
 A2 - 5,000 to 14,999
 A3 - 2,500 to 4,999

Source: Raees Husain, Annual Report Analysis for Small Troubled Water and Sewer Companies: 1987 (Columbus, Public Utilities Commission of Ohio, 1988)

Fig. 3-1. Ohio's jurisdictional water companies as plotted in the PUCO Electric and Water Division's mapping project

Northwest District

MADISON WATERWORKS, INC.
 599 West Andover Road
 Mansfield, OH 44907

Classification: WW
 County: Richland
 Township: Madison
 Geo.-Pol.: 700702
 Company map ref.: 19

Primary Source: Ground Water
 Average Production (Gals./Day): 108,500
 Storage: 35,000
 Customer Count: N.A.
 Population Served: 1,150

SYSTEM NAME	OWNERSHIP/ MAP REF.	COUNTY	POPULATION SERVED	DISTANCE (MILES)
Mansfield	M 1	Richland	55,000	5
Bucyrus	M 2	Crawford	13,410	26
Galion	M 3	Crawford	12,200	18
Willard	M 4	Huron	5,950	22
Mount Gilead	V 1	Morrow	3,500	25
New London	V 2	Huron	2,500	23
Ontario	V 3	Richland	2,450	8
Fredericktown	V 4	Knox	2,400	28
Bellville	V 5	Richland	1,714	15
Greenwich	V 6	Huron	1,428	16
New Washington	V 7	Crawford	1,225	23

RURAL ELECTRIC CO-OP. SERVING AREA

R.E.A. NAME	CO. OFF. MAP REF.	COUNTY	DISTANCE (MILES)
Holmes Wayne	12	Holmes	35

INVESTOR-OWNED ELECTRIC COMPANY SERVING AREA

CO. NAME	CO. OFF. MAP REF.	COUNTY	DISTANCE (MILES)
Ohio Edison	6	Summit	70

NEAREST INVESTOR-OWNED ELECTRIC COMPANY DIVISION OFFICES

CO. NAME	DIV. OFF. MAP REF.	COUNTY	DISTANCE (MILES)
Ohio Edison	Mansfield	Richland	5

Source: Raees Husain, Annual Report Analysis for Small Troubled Water and Sewer Companies: 1987 (Columbus, Public Utilities Commission of Ohio, 1988)

Fig. 3-2. Consolidation matrix used to identify troubled jurisdictional water utilities and possible consolidation partners

three-page form has a "fill-in-the-blanks" format. Commission staff also are available to help prepare the filing.

Action has been taken to address the problems of Ohio's small water utilities. Subsequent chapters of this report will provide criteria and staffing resource estimates useful in conducting a policy analysis of these initiatives and those found in other states.

CHAPTER 4
STRATEGIES IN OTHER STATES

Staff members at the Florida, Illinois, Indiana, Kentucky, Michigan, New York, Pennsylvania, Vermont, and West Virginia commissions were interviewed to learn how they regulate small and not-for-profit water utilities. Commission staff members who work with water utilities on a regular basis were queried about the size, profitability, and operating characteristics of their state's water utilities. In addition, they were asked about their state's regulatory techniques, including simplified rate procedures, utility exemptions, and outreach programs.

Illinois

The Illinois Commerce Commission regulates 80 investor-owned water and/or sewer utilities. Of these, nine were Class A, five were Class B, six were Class C and 60 were Class D, and E in size, the smallest. The Commission has five staff members assigned to water cases.

The number of regulated water and sewer utilities in Illinois peaked at about 150 in the mid-1960s and remained nearly constant until the mid-1970s. The decline since then was achieved primarily through the efforts of Commission staff who encouraged developers to obtain service from existing investor-owned or municipal operations through direct extensions or satellite operations, or to form mutual and cooperative systems. Staff's efforts stemmed from a statutory requirement that all transactions between utilities must be approved by the Commission. Staff's actions suggest it has adopted a proactive interpretation of the statute by encouraging system consolidation.

Illinois' mutual water systems (also referred to as homeowner's associations) have been exempt from regulation since 1968. Mutual sewer operations were exempted in 1975. In addition, entities that sell water to themselves, such as nursing homes and industrial parks, are not regulated as they do not hold themselves out to the general public as a utility.

Simplified rate procedures are available for water and sewer utilities whose annual revenues are \$50,000 or less. In general, the simplified rate process, made formal in administrative rules, has shortened the time needed to process a small company's rate request. The process also has relieved hearing examiners from the chore of participating in small cases, freeing more time for major cases. Customers also have benefited through reduced rate case expenses.

West Virginia

The West Virginia Public Service Commission regulates 170 Public Service Districts (PSDs). The Commission does not regulate trailer parks or nursing homes, most of which are master-metered, lack production facilities, and do not sell water to the general public. As a result, water rates charged these customers often are included in rental fees.

West Virginia's PSDs are non-profit entities that must be certified by the Commission to operate. The PSDs are created by county commissioners, who appoint three-member boards to oversee each PSD's operations. Because board members are appointed, PSDs can become highly political. In some instances, two companies provide service to the same area.

The state legislature in 1986 passed a law calling for the consolidation of systems where feasible. The PSD Division is preparing plans for thirty-eight of the state's fifty-five counties detailing how consolidation might work. The remaining seventeen counties are devising consolidation plans of their own. The first plans are expected to be ready for review late this year.

West Virginia also has a simplified rate procedure for water companies with revenues under \$200,000 a year. About 120 of the state's 170 PSDs qualify for the simplified rate procedure. The remaining utilities must use normal ratemaking procedures, including filing full accounting reports and exhibits to justify their proposed rate increase. PSDs file a "Rule 19-A"

rate application, a one-page form expressing the District's desire for a rate change. Upon receipt of the application, Commission staff performs an audit and prepares a revenue requirement statement.

State statute requires the PSD Division to conduct regular training seminars for system board members. The Division holds two beginner and two advanced training seminars a year. In addition, statute directs the Division to provide technical, financial, and regulatory assistance whenever a PSD seeks help. The Division also publishes a newsletter--not mandated by law--that gives information on technical issues and policy changes at the Commission.

Kentucky

The Kentucky Public Service Commission uses ten staff members to regulate 213 water companies.²¹ Virtually any system that is not municipally run is subject to Commission control. The Commission regulates water companies that range in size from 10 to 70,000 customers, although most have fewer than 1,000 customers. As in other states, if water is only one of several fees charged at a nursing home or trailer park, the Commission does not exercise regulatory authority. Similarly, if a customer is on a master-metered system, Commission regulation does not apply as long as the dollar-for-dollar cost of water is passed to the customer.

Simplified rate proceedings are available to Kentucky utilities that have 300 or fewer customers, or \$200,000 or less in revenues. Under the procedure, a utility makes an initial request and staff analyses billing information, reviews financial records, and prepares a recommended rate increase. The simplified process means that formal hearings often can be avoided, saving the utility considerable time and expense.

The Kentucky state legislature, in its last session, streamlined regulations to let water utilities automatically pass through all charges related to the construction of new plant, as long as financing was arranged through a federal agency.

²¹ Interview with Phyllis Fannin, Director of Rates and Tariffs, Kentucky Public Service Commission, September 1988.

Administrative rules require Commission staff to conduct training sessions. After a new accounting system recently was introduced statewide, for example, thirty workshops were planned to train water utility executives. Related to the training programs, a comprehensive guide to managing a water utility and complying with state statutes is being prepared by the commission staff in conjunction with state, regional, and federal agencies.

Pennsylvania

The Pennsylvania Public Utilities Commission regulates 400 water utilities, including some municipal systems.²² The Commission does not generally regulate trailer parks, said one staffer. Instead, trailer parks are viewed as a single, master-metered customer.

Simplified rate proceedings are available to Pennsylvania companies with \$100,000 in revenues or less. Using a question-and-answer-type format, the abbreviated form is filled out by the utility. Its officers may meet with staff members to ask questions prior to filing the paperwork. Staff then audits the form and recommends tariffs.

The Commission staff is becoming more active in looking for water utilities that may need assistance. Staff recently reactivated its "troubled water company task force" whose purpose is to identify companies that have failed to file rate cases for long periods. The task force was set up at the Commission's direction. Once such companies are found, they are told that shortened forms are available. Companies are identified through a review of their annual report.

One reason Pennsylvania companies may have hesitated to file rate requests in the past was the Commission's decade-old policy limiting rate increases to not more than 50 percent of current revenues to ease "rate shock". That policy has been dampened by provisions of a three-year old state law that created a pool of bond money earmarked for water system improvements. Under statutory and administrative rules set up to run

²² Interview with Robert Bennett, Division Chief of Options and Technical Review, Pennsylvania Public Utility Commission, September 1988.

PennVest, as the money is known, a water utility may pass on to consumers any rate increases it needs to repay money borrowed for system improvements. As a result, rate hikes of 100 to 150 percent, in some instances, now may be possible.

PennVest provides financial assistance for drinking water and wastewater system projects through the Pennsylvania Infrastructure Investment Authority. Financial aid is targeted at systems serving populations of 12,000 or less or projects that benefit systems of 1,000 or fewer hookups. A system's need for financial assistance is judged in part by the costs incurred by comparable systems, the ability of affected ratepayers to pay higher rates, other sources of financing, and a determination that aid will not replace resources already available to the applicant.

Indiana

The Indiana Utility Regulatory Commission regulates 500 water utilities with a staff of three engineers and three accountants.²³ The rates and charges of municipal water systems are subject to Commission review, although state statute allows municipal systems to withdraw from Commission regulation by a vote of their legislative body. Trailer parks and nursing homes are exempt from regulation as long as their water charges are included in other rental fees.

Indiana offers a separate rate process for systems with fewer than 5,000 customers. Roughly three-fourths of the state's water utilities are eligible for this process. The process has proved "burdensome" for many small utilities because the form is too complex, one staffer acknowledged. However, the simplified procedures may decrease the amount of time and expense consumed by a formal rate hearing.

Indiana has no formal outreach program available for water utilities, but endorses regularly held water association training programs. In addition, a statute directed the Commission to institute a process of

²³ Interview with Bill Flohr, Senior Engineer with the Indiana Utility Regulatory Commission, September 1988.

scanning annual reports looking for "red flag" indicators of financial trouble among utilities with at least 5,000 customers. The state's small utilities are exempt from review, but may have more operating troubles than larger utilities. One staff members said their exclusion stemmed from the state legislature's distrust of large utilities and general feeling of confidence in small utilities.

Michigan

Michigan regulates water companies with more than seventy-five customers. Although an estimated 200 may meet this standard statewide, only twenty-two are regulated. The discrepancy is due, in large part, to the Commission's focusing its priorities on regulating telecommunications, electric, and gas utilities, a staffer said. As a result, no staff are assigned regularly to water utilities. The state legislature last year exempted from regulation trailer parks that pass on to customers their dollar-for-dollar cost of providing water.

A water task force has been formed to consider simplified procedures for Michigan's water companies. Its recommendations were turned over to a planning group and have not yet been made public. More importantly, perhaps, the Commission is actively looking for another state agency to take over regulation of water utilities entirely. No formal decision has been made on this initiative, either.

New York

The New York Public Service Commission regulates 475 water utilities using a staff of twenty-seven. Municipal systems and fire districts are exempt from Commission regulation, as are owner-tenant relationships found in trailer parks and apartment houses. Commission staff has tried to convince systems to consolidate to form large systems, or for large systems to form subsidiaries to serve developing areas. These efforts have been staff initiated rather than in response to statutory or administrative directives.

Formal rate hearings are required if a utility asks for more than a \$100,000 increase in rates, or if the request exceeds 2.5 percent of

revenues. Requests for increases below those amounts are reviewed by staff, which makes a recommendation to the Commission. Perhaps one rate case in ten filed in this abbreviated manner needs a formal hearing to settle disputed issues, the staff member estimated. Using the shortened procedure, a utility can obtain rate relief in as few as ninety days, an important factor for companies facing financial troubles.

New York offers no outreach programs to water utilities.

Florida

The Florida Public Service Commission's Division of Water and Sewer has forty-five staff members to regulate 500 water companies. Exempted from regulation are hotels and motels, landlords providing service to tenants without specific compensation for the service, systems with the capacity or proposed capacity to serve 100 or fewer persons, nonprofit corporations, associations or cooperatives providing service to members only, and resellers who charge rates that do not exceed actual purchase prices.

Florida allows each county the choice of accepting or rejecting Commission regulation. Of sixty-seven counties, thirty-three are regulated. By and large these are the state's most populous counties. The unregulated counties enjoy home rule, although Hillsboro County has a "mini-PSC" of its own. In most unregulated counties, disputed decisions are litigated before a District Court of Appeals judge.

The Florida Commission encourages formation of homeowners' associations, which are not regulated. In doing so, staff is following a directive set in the Commission's administrative rules. Commission staff works with real estate developers to set up associations, and offers examples of how other associations were established. While a homeowner's association may be exempt from Commission regulation, it must be licensed as a non-profit corporation and must be approved by the Department of Environmental Resources.

The Commission provides staff-assisted rate cases for any water or sewer utility with revenues under \$100,000, or under \$200,000 for a combined operation. Staff-assisted rate cases are available as the result of administrative rules.

CHAPTER 5
ALTERNATIVE STRATEGIES

The regulatory strategies explored in this report can be grouped under four headings: strategies that exempt the smallest systems from regulation, strategies that train and assist system operators, strategies that consolidate systems, and strategies that explore alternative methods of regulation.

Exemption Strategies

Every state commission interviewed exempts from regulation landlord-tenant relationships. Simply stated, if a water provider does not hold itself out to the general public as a utility, it is exempt from regulation. Thus, in many states where water is merely part of the rent a tenant pays a landlord, that transaction is not regulated. The rule applies to mobile home parks, nursing homes, and apartment complexes, among others.

This exemption removes from a state's regulation many of its smallest utilities and recognizes what some might call a strictly private business relationship. If Ohio were to adopt a similar rule it would exempt from regulation roughly 575 of the 700 systems it potentially could regulate; more than 80 percent.

Because many of the exempted systems also are among a state's smallest, they often are the most financially troubled, and operate under high capital costs and the burden of small customer bases. Regulating these systems no doubt would prove expensive, particularly when formal rate cases were litigated. Such regulatory costs can overburden a utility and its ratepayers once the necessary lawyers, accountants and consultants are hired.

Outreach Strategies

One technique for dealing with the cost of rate case litigation is to implement outreach programs. Varying widely in scope and purpose, such programs may include simplified rate procedures, training programs, technical assistance, regular reviews of operating results, and newsletters. These programs can be administered by the Commission alone or as a joint effort with other state agencies and industry trade associations. For example, the Kentucky PSC is working with state, regional and federal agencies, and trade groups to develop a handbook for water utility operators. The Indiana URC encourages training sessions offered by the state's water associations. Likewise, other commissions look to their state's health and environmental protection agencies to take the lead on providing information and training on issues related to their fields of expertise. Ohio's current training effort could be expanded as appropriate.

The key to these programs is coordination and cooperation among agencies to ensure that policies and their purposes are stated clearly. A multi-agency approach also fosters the recognition that water companies are an issue not only for regulators, but for economic development, health, and environmental officials.

Equally important, outreach programs often make it easier for water utilities to do business. Simplified rate procedures may let an inexperienced company officer file for a rate increase without hiring a lawyer or consultant. If staff members are active in preparing the documents needed to justify a rate increase, the rate relief process can be accelerated. Obviously, a commission must respect the right of customers and other intervenors to object to a rate increase request. Despite the use of an abbreviated filing, a formal hearing may be required.

Commission-sponsored training programs also may help improve a water utility's operation as staff members meet with officers to discuss new techniques, rules, and procedures. The West Virginia Commission is mandated by law to hold training sessions for new Public Service District board members, and the Kentucky Commission is planning thirty training sessions to teach water utility officers new accounting procedures. To augment formal training sessions, newsletters (such as the one recently implemented in

Ohio) are used to inform utilities of changes in rules and policies, and to offer guidance.

A commission also may choose to review a utility's finances on a regular basis. This can be done either by requiring a utility to file a rate case at specified intervals, or by directing staff to look for "red flags" in a company's annual report. The first choice suggests a more proactive role for a commission and could prove expensive, particularly if financially stable companies were obligated to comply. Not only would sound companies have to file what could be an unneeded rate case, but the commission, its staff, and hearing examiners could be diverted from more pressing issues.

Ohio's current strategy of reviewing all annual reports with an eye toward signs of pending financial trouble seems to be a cost efficient way to review the finances of a large number of utilities. Armed with those "red flag" indicators, staff could make informed judgments about a utility company's needs.

The Indiana URC has just such a system in place. One difference in Indiana's system, however, is that it reaches only those companies with 5,000 or more customers. Many small utilities that may need help are overlooked.

Pennsylvania has a troubled water company task force that reviews the finances of the state's water utilities and lets them know that simplified rate procedures are available for them to use. The task force had been dormant for some time, but recently was reactivated.

Consolidation Strategies

Another strategy that the Ohio PUC may wish to consider is water system consolidation. Through consolidation, centralized management is achieved, increasing the likelihood that experienced managers would operate the system. What's more, a consolidated system could provide a sufficient customer base to allow the efficiencies of scale that Ohio and other states have identified as necessary for a utility to be profitable. Furthermore, the cost of system expansions and repairs could be spread across a larger base, reducing the size of rate increases for system improvements and easing the rate shock that often accompanies large rate hikes.

To state the obvious, consolidation would ease the commission's burden, too, as fewer companies would have to be regulated.

Models for consolidation may be found in West Virginia and Illinois. In West Virginia, the Commission is planning the legislatively-mandated consolidation of many of the state's 170 Public Service Districts.

In Illinois the Commission staff has encouraged consolidation for at least two decades, although one staffer suggested that further consolidation would be difficult as most easily achieved consolidations already have occurred. Staff members encourage real estate developers to link their development's water lines with existing systems instead of creating an independent and new water system. Developers also were encouraged to form mutual or cooperative operations, which are not regulated by the Commission. In addition, the staff has encouraged municipal systems to enlarge their service districts by spreading into areas that are undergoing development.

Large costs may emerge, however, if a troubled water company is consolidated or merged. The Connecticut case cited earlier demonstrates how costly it can be to rebuild a system for a small number of part-time customers. The alternatives (further deteriorating plant and increasingly poor water qualities) may be even more expensive, however.

Intergovernmental Strategies

A commission could work in concert with other state agencies to regulate a state's water utilities. For example, regulators could work with economic development, environmental protection, and health officials to offer a coordinated and comprehensive approach to financing projects, protecting the environment, and meeting water quality standards. If the effort were well coordinated the quality of regulation could be enhanced.

Cooperation among Ohio's administrative departments exists to some degree. As mentioned in chapter 3, PUCO staff participate in the Interagency Groundwater Advisory Council, whose other members include the Ohio Environmental Protection Agency, the Ohio Department of Natural Resources, and the Ohio Department of Health. Cooperation among state agencies exists, too, in the Ohio Water and Sewer Commission's Rotary Loan

Program, which is comprised of the Departments of Agriculture, Development, Health, and Natural Resources. Commission loan funds are used to pay that portion of the cost of a sewer or water line extension project that otherwise would have been paid by assessments on agricultural land.

Likewise, many commissions monitor the regulatory proceedings of state environmental protection agencies and health departments. Service complaints filed against water utilities with such agencies may reveal regulatory problems the commission needs to address.

Evaluation of the Strategies

Each of the strategies described above is evaluated qualitatively in table 5-1 in terms of five criteria:

1. Economic efficiency: the degree to which water is provided at the lowest possible cost, with comparisons with other similar water systems where possible,
2. Equity: the distribution of costs among customers,
3. Accountability: customer ability to participate in decisions about the water system and management responsibility to customers,
4. Administrative effectiveness: the ability of management to plan, organize, and control the delivery of high quality potable water, and perform all related functions such as budgeting, metering, and billing, and
5. Water quality: compliance with federal and state standards for preventing waterborne disease.

As can be seen in table 5-1, the outreach and consolidation activities are the most effective in terms of the five criteria. In general, consolidation is the single most effective strategy because it builds upon the known strengths of an existing company. Outreach is somewhat less effective because it depends on a "weak" utility taking advantage of PUCO-provided technical assistance. Deregulation appears to be the third most effective strategy. The intergovernmental strategy was hard to rate and generally was considered to be the fourth best option.

TABLE 5-1

A QUALITATIVE SUMMARY EVALUATION OF SELECTED ALTERNATIVE INSTITUTIONAL
ARRANGEMENTS FOR REGULATING SMALL WATER UTILITIES

Alternative Strategy I: Exemptions of small utilities
from commission jurisdiction

Evaluative Criteria

1. Economic Efficiency

- * Savings to utility of regulatory compliance and filing costs
- * If profit margin under regulation was judged to be too small by owners, then prices charged may increase
- * If demand is inelastic, prices may increase and subsequent bank financing may be easier to obtain
- * Does the third best job of increasing economic efficiency where demand is inelastic

2. Equity

- * Unregulated utilities may allocate costs to customers fairly or unfairly once they are deregulated, due to the inelasticity of demand
- * Uncertain outcome

3. Accountability

- * Small group theory and some economics theory suggest that if a utility is very small (the test being if the owner knows every customer's first name), then no price discrimination or service degradation will occur. If the owner is an absentee owner, or if the utility is just large enough so that small group dynamics do not work (such as the norm of not having your friends and neighbors mad at you), the owner would not be accountable through any formal mechanism
- * Accountability likely varies with the size and ownership pattern of each individual utility

TABLE 5-1 (continued)

A QUALITATIVE SUMMARY EVALUATION OF SELECTED ALTERNATIVE INSTITUTIONAL
ARRANGEMENTS FOR REGULATING SMALL WATER UTILITIES

Evaluative Criteria for Alternative Strategy I (cont.)

4. Administrative Effectiveness

- * Difficult to assess the affect
- * If it is assumed that regulatory oversight and rate approval directly contributed to the ineffectiveness of the small utility, then deregulation should improve the effectiveness of the utility
- * If regulatory oversight is completely removed, then one important incentive for improving the administrative efficiency of the utility is gone, without any necessary offsetting incentive being provided due to the inelastic demand

5. Water Quality

- * Least likely to improve compliance

Alternative Strategy II: Outreach

Evaluative Criteria

1. Economic Efficiency

- * Does the second best of the four strategies examined to improve the operating efficiency of utilities under a wide-range of assumptions. Does so by improving the technical, financial, and managerial resources available to the utility
- * May lower the cost of regulatory compliance and rate filing costs

2. Equity

- * Second best as the commission continues its oversight responsibilities, the equitable distribution of costs among customers appears assured for this strategy

TABLE 5-1 (continued)

A QUALITATIVE SUMMARY EVALUATION OF SELECTED ALTERNATIVE INSTITUTIONAL
ARRANGEMENTS FOR REGULATING SMALL WATER UTILITIES

Evaluative Criteria for Alternative Strategy II (cont.)

3. Accountability

- * Second best of the four strategies for ensuring accountability, due to continued commission oversight

4. Administrative Effectiveness

- * As the outreach assistance has as its primary goal the improvement of effectiveness, this should be the second most effective strategy

5. Water Quality

- * Second most likely to increase compliance, but a distant second because it may not provide the utility with the funding needed to finance improvements

Alternative Strategy III: Consolidation

Evaluative Criteria

1. Economic Efficiency

- * Assuming that a system has not deteriorated too far, and is taken over by a significantly larger utility, this option may be the best for increasing economic efficiency for the smaller utility through a reduction in its operating costs
- * Regulatory compliance and rate case filing costs should drop somewhat as the smaller utility improves its operating characteristics

2. Equity

- * If the host utility is significantly larger than the utility being taken over, then the superior cost control and tariff design abilities of the host should do a better job of fairly distributing costs

TABLE 5-1 (continued)

A QUALITATIVE SUMMARY EVALUATION OF SELECTED ALTERNATIVE INSTITUTIONAL
ARRANGEMENTS FOR REGULATING SMALL WATER UTILITIES

Evaluative Criteria for Alternative Strategy III (cont.)

2. Equity (cont.)

- * If the buyer is not significantly larger than the smaller utility, then the cost of improving the smaller utility may be unfairly borne by the ratepayers of the larger utility
- * This approach does the best of the four strategies examined because it combines improved management with continued commission authority over rates

3. Accountability

- * Likely to be the best of the four strategies because it combines the existing accountability of the larger utility (assumed to be as good or better than the accountability enjoyed by the smaller utility, or else the commission may not have approved of the merger) with continued commission oversight

4. Administrative Effectiveness

- * Should be the most effective strategy as it incorporates the smaller utilities production and operating facilities into the generally superior facilities of the larger utility

5. Water Quality

- * Most effective strategy because the superior financial resources of the larger company may make it easier to obtain funding for improvements required for compliance

Alternative Strategy IV: Intergovernmental Options

Evaluative Criteria

1. Economic Efficiency

- * Unclear how operating costs would be affected, other than assuming that some improvement would occur due to the number of agencies involved

TABLE 5-1 (continued)

A QUALITATIVE SUMMARY EVALUATION OF SELECTED ALTERNATIVE INSTITUTIONAL
ARRANGEMENTS FOR REGULATING SMALL WATER UTILITIES

Evaluative Criteria for Alternative Strategy IV (cont.)

2. Equity

- * Uncertain impact on the equitable distribution of costs among customers

3. Accountability

- * Accountability likely to increase somewhat due to increased scrutiny by additional governmental agencies

4. Administrative Effectiveness

- * Likely to be the third most effective strategy as other agencies offer technical assistance to the small utility

5. Water Quality

- * Unlikely to improve compliance because no additional funding is obtained, but may increase the odds that a compliance waiver will be granted as additional agencies become aware of the compliance problems of small utilities

In this evaluation all the criteria were treated equally. The PUCO may wish to assign its own weighting scheme to assess the importance of the criteria.

CHAPTER 6

ILLUSTRATIVE RESOURCE IMPACT ASSESSMENT OF SELECTED ALTERNATIVES

Throughout the report, various alternative institutional arrangements for regulating small water utilities have been identified and briefly examined. In this chapter a simple assessment of the impact of each of the alternatives on PUCO staff resources is examined. Each assessment is necessarily illustrative and would subsequently need a more rigorous analysis by PUCO.

Estimating Commission Staffing Levels

As shown in chapter 5, several different strategies are possible. Some states have selected deregulatory approaches and others have developed strategies that improve the effectiveness of rate base regulation. In table 6-1 the staffing levels of selected state commissions and the number of water utilities that they regulate are displayed. As a rough rule of thumb it would appear that one full-time water staffer is needed for every eighteen water utilities regulated.²⁴

Exemption

A strategy of exempting some or all of the approximately 700 central water providers identified by the Ohio EPA could be based on the following three rationales.

²⁴ The commissions selected were those identified in NRRI's contract workplan, plus the states contiguous to Ohio. A "top down" ratio approach such as that illustrated here should be augmented by a "bottoms-up" analysis that identifies any needed staffing increases based on the type and extent of regulatory oversight and technical support to be provided.

TABLE 6-1

A COMPARISON OF THE FULL-TIME STAFF ASSIGNED BY
SELECTED STATE COMMISSIONS TO WATER UTILITY REGULATION

State	Number of Jurisdictional Water Utilities ¹	Number of Commission Water Staff ²
Michigan	22	N.A. ³
Ohio	52 ⁴	2
Illinois	80	5
West Virginia	170	20
Kentucky	213	10
Pennsylvania	400	15
New York	475	27
Indiana	500 ⁵	6
Florida	500	45

Average ratio: 18 utilities for every one staff member.⁶

Source: Interviews conducted by authors from July-September 1988.

¹ The size and type of utility under commission jurisdiction may differ significantly in each state. Caution must be exercised, therefore, when comparing the numbers.

² The numbers in this column do not include the attorneys that are usually assigned to a rate case or any other part-time assignments. The staff listed are assigned on a full-time basis to the water utility regulation office.

³ It is reported that no full-time staff are assigned, but that other staff are assigned on a part-time basis as required.

⁴ This number is the total prior to the passage of Amended Substitute Senate Bill No. 337 in 1988.

⁵ This number includes the systems of 5,000 customers or less that use a simplified rate-filing process. It is estimated that approximately three-fourths of jurisdictional utilities are eligible for this process. An adjusted number, therefore, may be equivalent (in terms of staffing needs) to around 200 utilities.

⁶ The average does not include Michigan because no full-time staff are assigned.

- I. If all trailer parks are not regulated because they do not (1) bill separately for water, (2) make a profit above the cost of delivering the water, and (3) sell water to customers outside of the trailer park, then approximately 350 fewer of the central water providers identified by the Ohio EPA would be regulated.
- II. If all nursing homes and shopping centers that do not (1) bill separately for water, (2) make a profit above the cost of delivering the water, and (3) sell water to customers outside of the nursing home or shopping center, then approximately seventy-five fewer of the central water providers identified by the Ohio EPA would be regulated.

Use of either of the two above policy options would require a decision as to whether existing rules and statutes would support the following interpretation: that entities that do not (1) separately bill for water, (2) charge more than the cost of delivering water, and (3) do not sell water to customers outside their primary business are not considered to be utilities and are not subject to regulation by the PUCO.

- III. Size (population served), annual sales, or volume of water sold may be used as criteria for deregulating central water providers identified by the Ohio EPA.

Often all regulatory rules and/or statutes provide for a minimum size for an entity to be regulated. In setting a minimum size limit, the costs of regulation should not exceed the benefits, whether for minimum wage, worker safety, or water quality compliance. Any of the three above criteria may be used to establish a minimum size criteria.

The Ohio EPA data base provided to the NRRI contains information on population served and volume of water sold. As can be seen in tables 1-2 and 1-3, a significant portion of the central water providers could be excluded from commission regulation if population cutoff criteria of 100 persons or 50,000 gallons-a-day pumped were chosen. Again, a decision would have to be made as to whether such a decision was allowable under current rules and statutes.

Outreach

Outreach activities are designed to minimize the long-run regulatory costs and to increase long-run benefits by investing in short-term technical assistance to small water utilities. The approach assumes that after a retraining period, utilities will operate in a more efficient and effective manner. It also assumes that the net result of decreased per-unit regulatory costs and increased benefits (such as better service to residential customers) will more than offset initial costs. This assumption lies behind the training and outreach activities observed in Illinois, West Virginia, Kentucky, and Pennsylvania. The average cost ratio for the four states with some form of outreach is approximately one staffer for every seventeen utilities.

Consolidation

Consolidation activities have a cost/benefit profile similar to outreach activities in general: upfront costs offset by long-term benefits. Because Illinois appears to have been the most active regarding consolidation, its one staffer to every sixteen utilities may prove to be a useful benchmark. As Illinois has been engaged in consolidation activities for a number of years, its initial staffing levels may have been higher.

Intergovernmental

Because no state has engaged in the mix of activities described here, no direct measure is available. It is assumed, however, that the level of effort will be approximately the same as for the outreach activities.

CHAPTER 7
CONCLUSION

An essential question that must be answered is to what extent the PUCO should regulate small water utilities. At one extreme, it could regulate all companies that are not owned and operated exclusively for the utility's customers.

As a plus, many small and financially troubled companies would be regulated and thus be made subject to directives that could improve their operations. As a minus, regulation can be costly, particularly for small utilities that already are strapped for money. Equally burdensome are the demands of rate case filings and the preparation of financial documents. Such requirements can overwhelm system managers, many of whom are untrained in running a public utility.

At the other extreme, the Commission could deregulate most water utilities. This would lessen administrative difficulties and would relieve the companies of the need to meet proscribed standards. This course entails a social cost, however. Consumers, particularly those linked to small water systems, would be subject to unregulated monopolies controlling an essential public utility. Not only could they be victims of unfettered price escalation, but they would be vulnerable to the failure of management to maintain and improve the water delivery system.

In weighing the issues presented here, the PUCO may find itself asking not if it should regulate small water utilities, but to what degree it should exercise control.

