

***A Strategy for Improving the Financial, Technical and Managerial
Capacity of Idaho's Public Drinking Water Systems***

***Idaho Department of Environmental Quality
July, 2000***

Preface

This document is a demonstration of how the State of Idaho, Division of Environmental Quality (DEQ) plans to implement a strategy to assist existing public water systems in improving their technical, financial and managerial capabilities. This initiative is a requirement imposed by the Safe Drinking Water Act (SDWA) on all states that wish to participate fully in the Drinking Water State Revolving Loan Fund program. Section 1420(c) of that Act specifies five elements that a state must take into account when preparing a strategy for helping existing public water systems to improve their capacity. The state is required to submit its strategy to EPA for review by August 6, 2000.

In April of 1998, Idaho DEQ convened a Citizens Advisory Committee to advise the agency on how it should approach the SDWA capacity development provisions. This Committee was composed of persons who represented a wide variety of groups with an interest in drinking water issues. A *Report of Findings* was submitted to DEQ's Administrator in early 1999.

The *Report of Findings* is the foundation on which Idaho's Capacity Development Strategy rests. It describes in detail how the five required elements were considered in the course of the Advisory Committee's work. It provides sixteen specific recommendations to DEQ on how the agency can assist public water systems in improving TFM capacity. The *Report of Findings* is included in its entirety as **Part 2** of this document.

Part 1 of this document is a discussion of DEQ's consideration of the Advisory Committee's findings. It lists the recommendations that were chosen for implementation and the rationale behind these choices. It also discusses the resources that will be applied and the timetable that will be followed in implementing Idaho's Capacity Development Strategy.

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Part 2—Report of Findings of the Capacity Development Citizens Advisory Committee

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Part 1—Idaho's Capacity Development Strategy

A. Introduction

The *Report of Findings* submitted by Idaho's Capacity Development Citizens Advisory Committee is a comprehensive document which provides a clear discussion of the five elements that a state is required to consider when preparing a Capacity Development Strategy. Part 1 of this document will not simply repeat material presented in the *Report of Findings*. Instead, it will provide a description of the process and rationale by which DEQ has used the Committee's recommendations to fashion a Capacity Development Strategy for the State of Idaho. This document emphasizes the overall content of the strategy rather than the process by which it will be carried out. It is written in plain language designed to make it easy to read by managers, stakeholders, and citizen policy makers.

B. Public Involvement

The Citizens Advisory Committee was the primary means for obtaining public involvement in developing a strategy. The members of the Committee represented a wide array of interests and there was considerable networking among members and their organizational associates during the course of the Committee's work. It is felt that this process established a new and higher benchmark for public involvement in implementing initiatives within Idaho's Drinking Water Program.

In an additional effort to engage the broader public, a series of workshops was held in six cities throughout the State. While DEQ believes strongly in the principle of public involvement, it also freely acknowledges that modern times are often characterized by what might be called a culture of disengagement, in which citizens are generally reluctant to contribute personal time to the examination of government initiatives unless there is a clear and immediate impact on their personal lives or interests.

Although DEQ offered considerable opportunity for citizen input, attendance at the public workshops in late 1998 was quite limited. Those who did attend were usually associated with drinking water systems or non governmental organizations and were interested mostly in whether or not the program would offer a promise of meaningful government services in the short term. Most attendees were not prepared to provide pointed commentary on the SDWA requirements or the recommendations of the Advisory Committee, even though the *Report of Findings* had been posted on the Internet and ads had been published in the State's major newspapers containing instructions for obtaining a copy of the report. In spite of these shortcomings, a number of comments were received and responses to these comments are offered in Section E of the *Report of Findings*.

It is expected that public interest will increase as the Strategy is implemented and assistance efforts begin to have a direct impact on water systems and their customers. In the section concerning future plans (Page 13), there is further discussion of how DEQ hopes to elicit ongoing public participation.

C. The Five Required Elements

The SDWA requires the State to consider five elements when preparing its strategy:

- Methods or criteria to prioritize systems
- Factors operating in the State which impair or enhance capacity
- How the State will use the authority and resources of the SDWA
- How the State will establish a baseline and measure improvements
- Identification of interested persons

The Citizens Advisory Committee looked at all of these elements in detail and the results of their deliberations are included in the *Report of Findings*. This section of the document will be limited to a discussion of how DEQ evaluated the Committee's findings in these five areas and its decisions on which elements to include in the final strategy.

C.1. Prioritizing Systems for Assistance under the Strategy

DEQ will adopt the scheme developed by the Advisory Committee, which is illustrated on pages 6 and 7 of the *Findings Report*. In simplest terms, this approach targets systems that are experiencing compliance problems. It then divides these problems into "critical" and "serious" categories, based on consideration of potential public health impacts.

The prioritization scheme is not intended as the sole means by which a water system would become eligible for assistance. All existing systems may apply directly to DEQ for assistance at any time. Furthermore, systems that rise to the top of the priority list because they are having compliance problems may not receive assistance if they are unwilling to engage in a partnership with DEQ and its service providers. All of this is consistent with recommendations given by the Committee.

Finally, the existence of a prioritization scheme is intended to target capacity development efforts in a manner that recognizes resource limitations, but it is not expected to limit the eventual reach of these efforts. As part of the State's core drinking water program, capacity development assistance is expected to be available in the longer term to virtually any water system that has a need and is willing to cooperate with DEQ or its partners in achieving solutions.

C. 2. Factors that Encourage or Impair Capacity

The Advisory Committee committed a large amount of time to delineating these factors. In its

review of all factors identified, the group selected a subset for consideration when putting together its recommendations on the specific types of capacity development assistance that should be provided in Idaho (the sixteen recommendations discussed below). Those factors that were considered to be clearly outside of DEQ's ability to influence or control were dropped from immediate consideration. However, with an eye to the future, the Committee retained all of the factors in its report so that DEQ could revisit them. Changing social, demographic and political circumstances could potentially make some factors more approachable in the future than they appear to be at present.

In its review of the *Findings Report*, DEQ managers and drinking water program staff studied all of the factors listed and concurred broadly with the Committee's choices of those that should inform capacity development efforts in the immediate future.

C. 3. How the State will use the Authorities and Resources of SDWA

The *Findings Report* lists sixteen recommendations for programmatic activities that DEQ could choose from in implementing a Capacity Development Strategy. DEQ weighed all of these recommendations carefully and concluded that it would select half of them for attention during the initial implementation of its strategy.

The SDWA calls for the state to apply its authorities and resources in three general areas:

Assist systems in complying with the national primary drinking water regulations. Virtually all of the chosen recommendations are designed to enhance the ability of water system managers and operators to understand and successfully comply with the regulations. The prioritization scheme previously discussed will target systems that are experiencing compliance problems.

Encourage the development of partnerships between public water systems. Although there is not a specific recommendation that emphasizes this topic, DEQ intends to weave this theme into the specifications for all training products and educational materials that are developed under the strategy.

Assist public water systems in the training and certification of operators. DEQ has sponsored operator certification training for a number of years and will continue to do so into the foreseeable future. Because this element was already in place, it was not included in the Committee's recommendations as a separate issue, although each of the recommendations listed below addresses important operator skills and knowledge. Additional remarks on this topic are on Page 12, in the section on integrating the strategy with the existing drinking water program.

The selected recommendations are listed below. Additional information is given on Pages 10 and 11 in sections dealing with resources that DEQ will employ and a tentative implementation schedule.

- 1) Enhanced Sanitary Survey—DEQ will attempt to enhance its routine sanitary surveys to include increased attention to elements of system capacity. Since the sanitary survey has traditionally centered on technical capacity, the enhancement mentioned here will focus on managerial and technical capabilities. A goal associated with this recommendation is to gather and analyze capacity related information through time, which will be interpreted as feedback on the success of capacity development efforts and also used as a resource in making future program enhancements.
- 2) TFM Self-Assessment Tool—An easy-to-use tool is needed to guide water systems through an examination of their own TFM capacity, with a view to identifying opportunities for improvement and suggesting the types of assistance that would be beneficial to them.
- 3) Business Planning Handbook—Most small water systems do not engage in planning activities. Frequently, they lack the knowledge needed to carry out this vital function. This handbook will contain simple but inclusive instructions on the types of planning activities appropriate for small water systems, with an emphasis on financial and managerial topics.
- 4) Water System Financial Training—This will be a geographically distributed training program dealing with topics such as rate setting, budgeting, and planning. There is some overlap between this item and number 6, below.
- 5) Handbook on Statutes and Rules—This was envisioned as a simple description of regulatory requirements imposed on public water systems by the SDWA. While the feasibility of such a product has not been fully evaluated, DEQ felt that something of this nature would in fact be useful to water systems and appreciated by persons who operate them.
- 6) Capital Facilities Management Planning—Many water systems lack a detailed knowledge of an appropriate replacement schedule for the primary physical components of their facility. This recommendation would take the form of training for system managers and operators on how to put together a long term capital replacement plan and how to budget so that funds are available when equipment needs to be repaired and replaced.
- 7) Proactive Distribution of Information—DEQ should enhance its efforts to provide water systems with the earliest possible notice of new regulatory requirements.
- 8) TFM Training for DEQ Staff and Consultants—Because of past emphasis on the technical aspects of water system capacity, DEQ drinking water staff and many members of the consulting community are not especially well informed on financial and managerial capacity issues. This training would round out the expertise of these groups and enable them to provide better service to water systems.

DEQ made the choices listed above for several important reasons:

- Most of these activities lend themselves to outsourcing. State drinking water program staff will not be allowed to grow at the present time. Because existing staff could not be fully redirected to the capacity development effort, the only way to achieve meaningful results is by contracting for services with providers outside of the agency. Non-governmental organizations and other service providers are available within the state and region and should be able to provide excellent support for this program.
- Because many of the impairments to water system capacity identified by the Advisory Committee had to do with the knowledge possessed by DEQ and by water system managers and operators, it was felt that the emphasis in the early years of strategy implementation should be on learning tools.
- The recommendations chosen represent initiatives that can yield benefits in a relatively short time.

Note: It is important to recognize that the remaining eight recommendations of the Advisory Committee that were not selected for initial implementation are by no means being discarded or ignored. DEQ envisions the capacity development strategy as a long-term commitment. It is recognized that some of the best recommendations of the Committee are included in those that were passed over in this early phase of the program. The fact that they were not chosen is a function of resource limitations. It also results from a realistic assessment of DEQ's ability to control outcomes in areas such as land use planning, regionalization, and non-proliferation of small systems. For additional discussion of these topics, see the section on future plans on Page 13.

C.4. How the State will Establish a Baseline and Measure Progress

DEQ will adopt the three-pronged tracking system recommended in the *Report of Findings*. In summary, this consists of the following points:

1) **Compliance Tracking:** This includes observation of compliance trends on a statewide basis, as would be reflected in the triennial report on systems with a history of non-compliance and the significant non-compliers (SNC) exceptions report, as well as system-specific responses following the receipt of assistance under the capacity development strategy. To track the latter, systems that receive assistance may be asked to complete a survey regarding the effectiveness of that assistance, or may be asked to conduct a TFM self-assessment within a year of receiving assistance. Annual compliance reports, numbers of operators who become certified, and TFM assessments of SRF loan applicants are additional sources of information on water system capacity in the state.

2) **Outreach and Assistance:** This involves tracking of efforts more than results. The number of enhanced sanitary surveys conducted, number of capacity related site visits, and number of water systems which complete TFM self-assessments will be tallied annually.

3) Planning: A periodic survey may be conducted to determine how many water systems are engaging in capital planning, other types of business or financial planning, and self-assessment activities. It is felt that planning activities will serve as a useful index of capacity gains by water systems. Over time, statewide trends in the use of planning activities may also reflect the degree to which understanding of capacity issues is spreading among water system operators and managers.

The overall results of these tracking efforts will be used to assess the strengths and weaknesses of the strategy and provide the basis for future enhancements.

C.5. Identification of Interested Persons

DEQ believes that the Citizens Advisory Committee did an admirable job of identifying persons and interest groups that would be expected to have an interest in public drinking water. Although some of the identified parties declined to participate in the Committee's activities, it seems clear that a wide spectrum of interest groups was at least given an opportunity to do so. The final Committee composition represented a broad cross-section of interests and clearly met the SDWA requirement for a proactive process of public involvement.

Participation by the public at large has previously been discussed. Although invoking public interest is often a disappointing undertaking, DEQ expects to continue making information about capacity development efforts available through Internet postings, press releases, and in occasional public workshops that will be scheduled when future modifications in the strategy are being made. The Capacity Development Citizen's Advisory Committee may be re-activated in connection with future activities that are specific to this strategy. The state's Drinking Water Advisory Committee, which has permanent standing, will continue to be a primary vehicle for public involvement as well.

D. Rationale for the Strategy

All five of the elements required by the SDWA are incorporated in the Idaho Strategy.

- 1) A prioritization scheme which centers on system compliance, willingness to cooperate, and public health impacts will be followed.
- 2) The recommendations chosen for early implementation are direct outgrowths of an analysis of the factors that impair or enhance water system capacity in Idaho.
- 3) DEQ will use the funding available through SRF capitalization grants to underwrite the costs of this comprehensive assistance program.
- 4) DEQ will measure individual system responses to capacity assistance and will track overall trends in compliance within the state. In addition, specific activities carried out under the

strategy will be tallied as a general indicator of effort expended.

5) Public involvement has been an over-arching priority from the beginning and will continue, to the extent possible, in the future.

Taken together, the recommendations that will be carried out as part of the strategy will provide lasting benefits to existing public water systems by improving the knowledge base of system operators and managers.

E. Resources

As mentioned in Section C.3, on Page 7, DEQ currently lacks permanent staff that may be dedicated to developing all of the learning tools and training programs included in the recommendations chosen for the strategy. In a separate action that is independent of the Capacity Development Strategy, DEQ is working with a "sustainability subcommittee" of the Idaho Drinking Water Advisory Committee to develop stable, long term mechanisms for meeting the resource needs of the drinking water program.

In the meantime, the agency plans to prepare descriptions of the various products that are needed for the strategy and seek proposals from suitable service providers for development and delivery of these products. The means for accomplishing this work will be state contracts with service providers. An existing staff member within the drinking water program will attempt to work half time, beginning August, 2000; or sooner, to prepare product descriptions and begin soliciting proposals. Awarding of contracts and evaluation of deliverables will follow. Many excellent materials dealing with drinking water system capacity are appearing around the country as states gear up to comply with these SDWA requirements. It is possible that some of the learning tools may be available without the need for an extended development process.

Funding will be provided by an annual set-aside from the state's capitalization grant for the drinking water revolving loan fund. In addition to supporting the development of educational products, these funds will allow DEQ to build upon existing partnerships with technical assistance providers. For the next three years (federal fiscal years 2001-2003), DEQ proposes to set aside 5% of its capitalization grant for this purpose. This amounts to about \$350,000 per year, depending on Congressional appropriation levels. Of course, the full amount of the set-aside may not be needed, in which case it will revert to the loan fund.

A detailed work plan and budget for use of the set-aside funds will be prepared following EPA's review of this strategy. Due to increasing program workload associated with a number of new primary drinking water regulations scheduled for promulgation during the next several years, it may be necessary for DEQ to withdraw all or a portion of its permanent staff support for the strategy and replace this resource allocation with contract labor, an intern, or some other suitable arrangement.

F. Implementation Schedule

Instead of committing to a rigidly defined schedule, DEQ would prefer to retain an element of opportunism in this undertaking, with a view to shopping around for the best goods and services, making maximum use of existing products (which involves searching and screening), and responding to the level of interest shown by water system operators and other officials.

As DEQ proceeds to develop specifications and descriptions of the required products, it will at the same time conduct an initial prioritization activity to develop a list of water systems to be targeted during the program's earliest efforts. Input from field offices, direct solicitations of interest from systems, SNC lists and prior reports on systems with a history of capacity related problems will all be used to generate this first group of systems.

The table below offers a general scheme for the description, development, and implementation of the eight recommendations discussed in Section C.3 of this document. The recommendations appear in approximate chronological sequence, based on present expectations regarding availability and practicality.

Recommendation	Prepare Specifications and RFP by....	Approximate Target Date for Delivery of Services....
1) Enhanced Sanitary Survey	NA	Currently underway—ongoing
2) TFM Self-Assessment Tool	Search existing products 9/2000	11/2000
8) Training for DEQ Staff and Interested Consultants	10/2000	12/2000 or 1/2001
7) Proactive Distribution of Information	Internal DEQ mobilization Fall of 2000—make maximum use of Drinking Water Academy and other third party sources	Early 2001
4) Water System Financial Training and 6) Capital Facilities Management Planning	11/2000	Begin delivery mid-2001
3) Business Planning Handbook	Search existing products—3/2001	Late 2001 or early 2002, depending on whether existing products are found or a contract is required.
5) Handbook on Statutes and Rules	Search existing products, query service providers. Vision is of a modular product with use of computer/video elements. Mid 2001	2002

1.G. Integration with Existing Program

There are multiple linkages and interrelationships between the capacity development strategy and other aspects of the drinking water program. The following points are included as a means of ensuring that these relationships will be taken into account when implementing the strategy.

- All training programs developed and delivered under the auspices of the strategy will be evaluated for compliance with the “relevancy criteria” established in the state’s operator certification program. Although some subjects will not be directly applicable to operators, many will, and it is important that these programs count toward operator certification and continuing education requirements.
- The prioritization process and subsequent assessment activities carried out under the strategy may be used to steer systems toward the revolving loan fund program. Loans for consolidation of systems come to mind as a clear example, but there are others.
- The state’s compliance strategy allows water systems that have been assessed a monetary penalty to divert some or all of that penalty payment to constructive activities that will help to improve the system’s capacity and will act to prevent future compliance problems. A clearly beneficial application of this principle would be for a system that has been penalized to contract at its own expense with a service provider to conduct a capacity assessment. The system would then be expected to act on the recommendations arising from the assessment so that financial, technical, and managerial capabilities would be improved.

1.H. Future Plans

When DEQ prepares its first report to the Governor of Idaho, in 2002, the agency plans to evaluate the possibility of expanding the strategy by adopting some of the more far-reaching recommendations of the Citizens Advisory Committee. These might include efforts to incorporate drinking water issues into local planning activities around the state; programs to encourage regionalization, consolidation, and satellite management schemes; improvements in inter-governmental relations; and loan guarantee or even grant programs. A “round table” approach to providing assistance to the state’s water systems is also considered a desirable feature in the longer term. All of these strategies have the potential to mitigate some of the more important legal, financial and institutional factors that impair water system capacity in the state. However, it is presently unclear what level of action and involvement the primacy agency will realistically be able to exercise in these areas.

DEQ plans to explore these issues, both internally and in cooperation with its Advisory Committees. The impairments noted in the *Report of Findings* will be systematically revisited. Public workshops are also an option for gathering suggestions and building support, provided sufficient interest can be generated. It is expected that ideas for approaching these challenges

will be better formulated in about two years, at the time that DEQ will be drafting its report to the Governor. This report may serve as a vehicle for conveying DEQ's ideas on how to expand the Capacity Development Strategy in a manner that is consistent with the agency's mission, lies within its discretionary powers, and is acceptable to DEQ managers and the Legislative and Executive branches of state government.

Part 2—Report of Findings of the Citizen’s Advisory Committee

The *Report of Findings* is the basis for the Strategy described in Part 1. It is also a reference document to be used in determining future directions for the state’s capacity development activities.

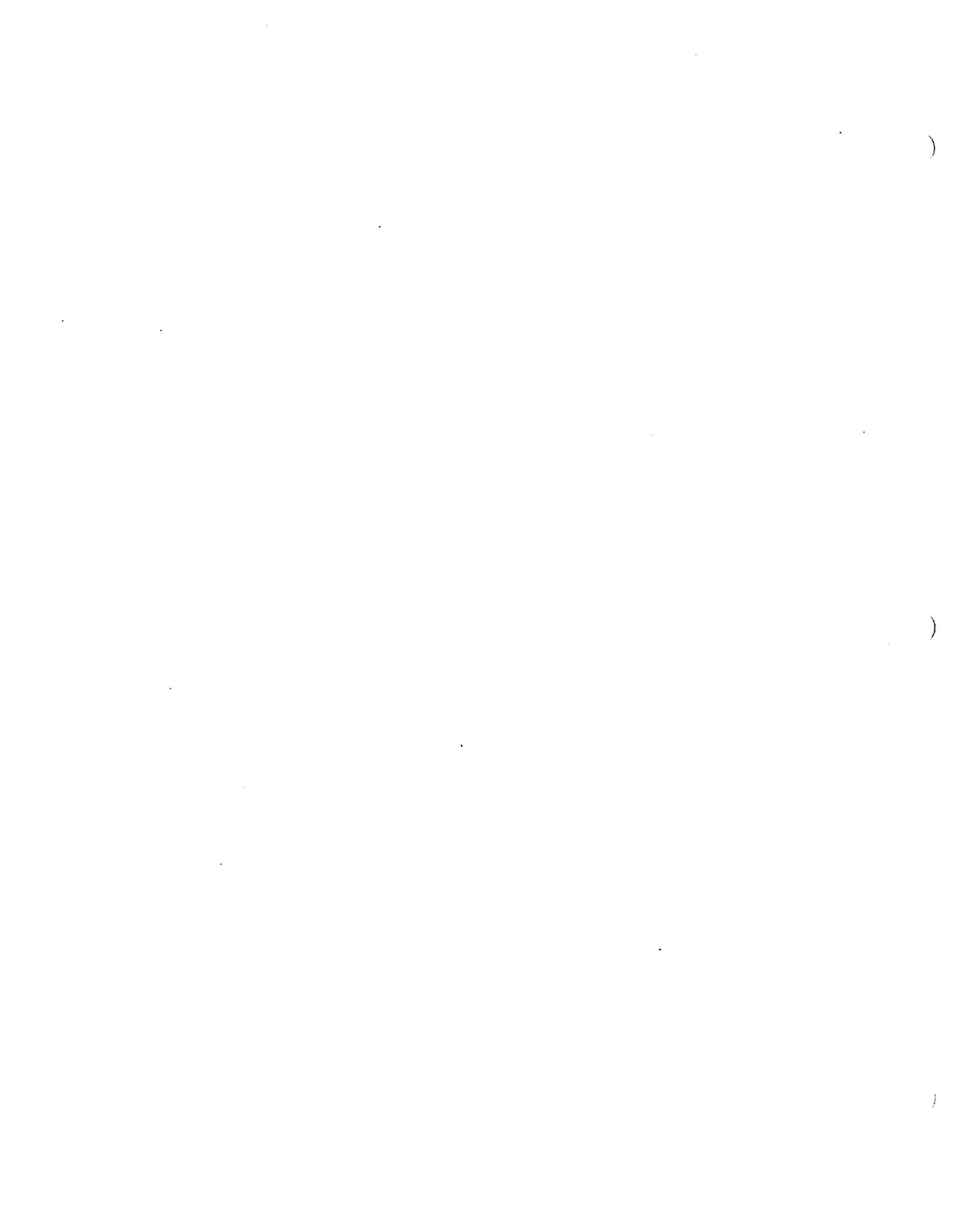


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EXECUTIVE SUMMARY

During the spring and summer of 1998, the Capacity Development Citizens Advisory Committee to the Division of Environmental Quality (DEQ) considered the challenge of improving the technical, financial and management (TFM) capabilities of public water systems. This *Report of Findings* presents the work of the Committee for consideration by DEQ managers. Guidance for the Committee in preparing this report came generally from the Safe Drinking Water Act (SDWA) Amendments of 1996. At the heart of this report are the Committee's recommendations regarding the programs that the Division of Environmental Quality's Drinking Water Program could establish — or if already established, strengthen — that would assist water systems in building capabilities to achieve compliance with the requirements of the SDWA.

The body of the report is presented in five sections, labeled alphabetically. This is an intentional correspondence with the language in the SDWA, which lays out the five elements that a state must consider when preparing a capacity development strategy.

SECTION A — PRIORITIZING WATER SYSTEMS MOST IN NEED OF CAPACITY ASSISTANCE

A multi-level ranking scheme is proposed, in which compliance with the drinking water regulations is a primary factor. Water systems failing to comply with regulations are more likely to lack financial, technical, or management capacity. Non-complying systems will be assessed to determine the seriousness of the capacity-related problems they are experiencing. These problems will be ranked as **critical** (Class A), which pose an immediate health risk, and **serious** (Class B), which have the potential to pose a health risk if uncorrected. A listing of common violations for each class has been developed. Water systems in the two classes would be ranked additionally by population served and by willingness to work with DEQ in achieving solutions.

SECTION B — FACTORS THAT IMPAIR OR ENHANCE WATER SYSTEM CAPACITY

Factors operating at the federal, state, and local level that impair or enhance water system capacity are presented in this section of the report. These factors were drawn from national studies, from the experience of Committee members, and from knowledge gained by the DEQ in administering the drinking water program over the years.

The Committee identified 135 factors at the federal, state and local levels that are either enhancements or impairments to public water system TFM capacity. Enhancements and impairments were further divided into six categories: Institutional, Regulatory, Financial, Tax, Legal and Other. These are displayed in Table 1E. The largest number of impairments was at the local level (38). Of the local impairments, financial impairments were the most significant group (12).

Only a subset of these factors, largely the impairments, was chosen by the Committee for consideration as part of the State's capacity development strategy. Thirty-three factors are specifically noted in Section B. The remaining factors were retained as part of the report because it is expected that they may be revisited as experience in capacity assistance is gained.

Table 1E: Federal, State and Local Factors That Affect Water System TRM Capacity

Factors	Enhancements	Impairments	Noted in Findings Report
<i>Institutional</i>	9	19	10
<i>Regulatory</i>	25	19	10
<i>Financial</i>	17	21	8
<i>Tax</i>	4	4	3
<i>Legal</i>	4	3	1
<i>Other</i>	2	8	1
Total	61	74	33

SECTION C— RECOMMENDATIONS ON HOW THE STATE CAN USE ITS AUTHORITIES AND RESOURCES TO HELP WATER SYSTEMS IMPROVE CAPACITY

The process of identifying enhancements and impairments to water system capability naturally led to a discussion of programs that could be employed by the State to improve capacity. This section includes sixteen recommendations for specific program elements that would help to diminish or eliminate factors acting to impair water system capacity. These are divided into four broad program categories: institutional, information, training, and assistance.

Institutional Programs:

- The Idaho Public Utilities Commission should continue to work for changes in their statutory and regulatory authorities to improve the manner in which that agency regulates small public drinking water systems.
- Water metering requirements already contained in Idaho regulation should be enforced so that water systems know how much water they are using. This information is critical for rate setting and for daily system operations.
- DEQ should encourage water systems to develop networks for peer review, information exchange, and sharing of technical resources.
- At every reasonable opportunity the DEQ should encourage cooperation among state agencies and between levels of government on matters affecting drinking water systems.

Informational Programs:

- DEQ should systematically gather data to improve its understanding of water system capacity, particularly concerning financial and managerial capabilities. One way to accomplish this would be to develop and utilize an *enhanced* sanitary survey that will permit DEQ field staff to periodically collect technical, financial, and management information about each of the State's regulated water systems. This information could then be used in a strategic sense to identify those water systems most in need of assistance to improve TFM capabilities.
- A self-assessment tool should be developed so that water systems can examine their capabilities and determine what type of assistance would provide the most benefit.
- The drinking water program should take a proactive approach in providing early notice of impending rule changes or new regulatory requirements.
- The DEQ should consider cooperating with counties and cities to ensure that public water system capacity issues are actively considered during planning activities carried out under Idaho's Comprehensive Planning Act.

Training Programs:

- Training should be provided to water system personnel in fiscal capacity and financial management, including rate setting.
- An education program should be developed to assist water systems in preparing accurate and useful consumer confidence reports.
- Develop and implement a training and assistance program to ensure that water systems maintain practical and up-to-date capital facilities plans. This will enable the systems to anticipate their revenue needs and make repairs and improvements in a non-emergency fashion.
- Training in technical, financial, and managerial capacity factors will be needed for drinking water program staff, contractors, consultants, and other service providers.

Assistance Programs:

- A *water system planning handbook* should be developed to help water systems develop and implement a planning process aimed at ensuring financial, technical, and managerial capacity.
- A *handbook on drinking water statutes and regulations* should be prepared for water system operators and managers in order to facilitate understanding and compliance.
- Investigate the possibility of creating a loan guarantee fund to assist small water systems in obtaining private financing for capital improvements.
- Longer term, DEQ may choose to move toward a "Massachusetts Model" for capacity assistance. This consists of a regularly scheduled forum, involving DEQ and a circle of potential service providers, at which systems needing capacity assistance are matched with the services they need.

SECTION D — TRACKING THE SUCCESS OF IDAHO'S CAPACITY DEVELOPMENT STRATEGY

In fashioning its capacity development strategy, the Committee noted in Section D how the DEQ might assess the performance of capacity building efforts. Four general measures of success were developed. First, the DEQ could note changes in compliance performance, both statewide and on a system-specific basis. Second, the DEQ could track the number of site visits and enhanced sanitary surveys conducted by program personnel. The number of water systems that complete self-assessments of capacity could also be recorded. Third, by conducting "customer surveys" to obtain feedback from water systems that receive assistance under the strategy, the DEQ could learn more about the effectiveness of its programs. Finally, the DEQ could keep track of the number of water systems that prepare capital facility management plans, water system plans, and other activities that contribute directly to enhanced capacity.

SECTION E — PUBLIC INVOLVEMENT IN PREPARING THE IDAHO CAPACITY DEVELOPMENT STRATEGY

The final section of the Committee's *Report of Findings* provides a description of how the Advisory Committee was formed and describes how the broadest possible involvement by citizens and stakeholders was obtained.

GLOSSARY OF TERMS AND ACRONYMS USED IN THIS REPORT

Capacity: Refers to the capabilities required of a public water system in order to achieve and maintain compliance with the drinking water rules. It has three elements:

Technical: Technical capacity or capability means that the water system meets standards of engineering and structural integrity necessary to serve customer needs. Technically capable water systems are constructed, operated, and maintained according to accepted quality standards.

Financial: Financial capacity or capability means that the water system can raise and properly manage the money it needs to operate efficiently over the long term.

Managerial: Managerial capacity or capability means that the water system's management structure is capable of providing proper stewardship of the system. Governing boards or authorities are actively involved in oversight of system operations.

DEQ: The Idaho Division of Environmental Quality. This agency is responsible for administering the drinking water rules in our state.

DWIMS: The State's Drinking Water Information Management System. A computer database containing inventory and monitoring data from public drinking water systems. Used as the basis for determining compliance with the drinking water regulations.

DWSRF: The Drinking Water State Revolving Loan Fund. Congress authorized this fund in 1996. Idaho's Legislature appropriated matching monies to enable DEQ to establish this fund and begin processing applications for loans to public water systems.

EFC: The Environmental Finance Center at Boise State University. An organization that operates under an EPA charter to provide assistance to states and communities on matters concerned with financial management and access to financial assistance.

EPA: The US Environmental Protection Agency. This federal agency oversees state programs and provides technical assistance. EPA determines when a state's capacity development program is in compliance with the safe drinking water act.

MCL: Maximum Contaminant Level. The maximum allowable level for a given drinking water contaminant.

PUC: The Idaho Public Utilities Commission. The state agency that has regulatory responsibility for drinking water systems that are privately owned and operated for profit.

PWS: Public Water System as defined in the Safe Drinking Water Act.

SDWA: The Safe Drinking Water Act, passed by the US Congress in 1973 and amended in 1986 and 1996.

TFM: Technical, financial, and managerial. This abbreviation is used to save space in the report and avoid frequent repetition of these terms.

REPORT OF FINDINGS

ON IMPROVING THE TECHNICAL, FINANCIAL AND MANAGERIAL CAPACITY OF IDAHO'S PUBLIC WATER SYSTEMS

CITIZENS ADVISORY COMMITTEE TO
THE IDAHO DIVISION OF ENVIRONMENTAL QUALITY



INTRODUCTION TO CAPACITY DEVELOPMENT/ SAFE DRINKING WATER ACT (SDWA)

Water system capacity is the ability to plan for, achieve, and maintain compliance with applicable drinking water standards. Based upon the research and technical assistance efforts of water works professionals, capacity is known to have three components: technical, financial, and management. Adequate capability in all three areas is necessary for a successful public water system.

Capacity development is the process of water systems acquiring and maintaining adequate technical, financial, and managerial capabilities to assist them in the provision of safe drinking water. The Safe Drinking Water Act's (SDWA) capacity development provisions provide a framework for states and water systems to work together to help ensure that systems acquire and maintain the technical, financial, and managerial capacity needed to meet the Act's public health protection objectives.

The 1996 SDWA Amendments include requirements for states to obtain authority to assure that new systems are viable, to develop a strategy to address the capacity of existing systems, and to ensure that potential Drinking Water State Revolving Fund (DWSRF) recipients have sufficient technical, financial and managerial (TFM) capacity prior to receiving loan funds (or that the loan funds will allow them to receive the capacity they require). The Act outlines several items to include in states' capacity development strategies for existing systems; however it is not mandated that states *must* include each of these items, but rather that they must *consider* each of the items in developing the strategy. Clearly, including each of the required elements produces a comprehensive capacity development program for the State and addresses all of the necessary issues. However, each State must examine each of the issues and determine those elements that best fit the needs of the State.

SDWA §1420(c)(2) addresses the requirements of strategies developed by each State to improve the technical, financial, and managerial capacity of public water systems under their jurisdiction. The development of the state's strategy is directly related to the level of financial resources available to help pay for water system improvements. A State that does not develop and implement a capacity development strategy will receive only 90 percent of the DWSRF allotment it would otherwise receive in FY 2001, 85 percent of its scheduled allotment in 2002, and only 80 percent of its scheduled allotment in each subsequent fiscal year.

In developing and implementing a capacity development strategy, SDWA §1420(c)(2) (A-E) requires states to "consider, solicit public comment on, and include as appropriate" five elements:

- Methods or criteria to prioritize systems [§1420(c)(2)(A)]
- Factors that encourage or impair capacity development [§1420(c)(2)(B)]
- How the State will use the authority and resources of the SDWA [§1420(c)(2)(C)]
- How the State will establish the baseline and measure improvements [§1420(c)(2)(D)]
- Procedures to identify interested persons [§1420(c)(2)(E)]

The Idaho Capacity Development Citizens Advisory Committee chose to prepare a comprehensive report of findings that includes consideration of all SDWA-required capacity development strategy elements.

IDAHO CAPACITY DEVELOPMENT CITIZENS ADVISORY COMMITTEE

The Idaho Capacity Development Citizens Advisory Committee was appointed in March of 1998, as the Division of Environmental Quality (DEQ) began to respond to the capacity development requirements of the 1996 Amendments to the SDWA. An extensive mailing was conducted to solicit interest in serving on the Committee. Included were Idaho's public drinking water systems, utility councils, organizations which represented counties, cities, child care, public health, sensitive sub-populations, the financial community, well drillers, and a number of other groups or individuals who were considered likely to have an interest in this topic.

DEQ's Administrator, Wallace N. Cory, selected a seventeen member Committee from a very impressive list of qualified volunteers. The selection process aimed at ensuring that the Committee would represent the broadest possible spectrum of interested parties while at the same time respecting the need to keep the group small enough to function efficiently. Additionally, a number of individuals who were not formally appointed chose to voluntarily attend the Committee meetings and were able to contribute materially to the Committee's work. Provisions were made to expand the public involvement process by the following means:

1. A mailing list of persons or organizations was developed so that periodic updates could be provided.
2. Arrangements were made to interview certain key parties, who were for various reasons unable to sit on the Committee.
3. A decision was made to present the initial recommendations of the Committee to the public through a series of public workshops.
4. Organizations that publish newsletters were asked to convey information about the Committee's activities.

These measures, taken together, helped to ensure that the Idaho public would have multiple opportunities to learn about and provide input to the State's Capacity Development activities.

MEMBERS OF IDAHO'S CITIZENS ADVISORY COMMITTEE

Miriam Adamson, Idaho Well Drillers Association
Margaret Ballard, Representative Crapo's Office
Sharon Bixby, Child Care Connections
Gerald B. Conger, DVM, Happy Acres Homeowner's Association
Kelly D. Howell, Falls Water Company
The Honorable Grant Ipsen, Idaho State Senator
Dennis Maughan, Idaho Association of Counties
Richard McCaughey, Building Contractor's Association
Don Munkers, Idaho Rural Water Association
Dean Oberst, Idaho Bankers Association
Fred Ostler, City of Pocatello Municipal Water System
Brian Patton, Idaho Department of Water Resources
David M. Six, City of Lewiston Municipal Water System
Tom Turco, District Health Departments
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IDAHO'S CAPACITY DEVELOPMENT CITIZENS ADVISORY COMMITTEE REGULAR CONTRIBUTORS

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IDAHO'S CAPACITY DEVELOPMENT
CITIZENS ADVISORY COMMITTEE
FACILITATORS/AGENCY STAFF

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SECTION A: METHODS OR CRITERIA TO PRIORITIZE SYSTEMS IN NEED OF TFM ASSISTANCE.

BACKGROUND

The key issue in designing the State's capacity development strategy is identifying and prioritizing those public water systems that are most in need of improving TFM capacity to deliver safe drinking water to the public. At the core of this discussion is this question; "what information about water systems does the DEQ or other stakeholders have that helps identify problems that need to be addressed?" Care was taken to identify and consider the variety of sources for information about the TFM conditions of water systems. Ultimately, the Committee determined the following:

- The best and most current information (consistent and verifiable) for providing an indication of the capabilities of public water systems is the technical compliance information maintained by the DEQ. Limited financial and management capacity information is maintained by the DEQ and by the Idaho Public Utilities Commission for regulated systems.
- There is a need to collect additional information about the water systems to determine TFM capacity in order to deliver specific assistance to meet T, F or M capacity deficiencies.

The Committee deliberated the issue of how current information could be used to identify and prioritize systems needing TFM capacity building. Discussions occupied portions of three meetings. Concerns were raised that assistance given under the capacity development program could be focused primarily on population considerations, thus directing the limited financial and program resources to the capacity deficiencies of larger public water systems.

The Environmental Finance Center staff contacted persons in the academic community for information on modern techniques used in risk assessment. The State Epidemiologist was consulted for advice on ranking health risks in communities of various sizes. After studying this information and gaining increased familiarity with the types of problems that water systems in Idaho actually experience, several key generalizations emerged:

- The drinking water program already has well defined mechanisms in place for dealing with acute risks to public health. Public notification, boil water advisories where appropriate, and immediate corrective actions are all undertaken when pathogenic organisms or high levels of chemical contaminants are detected in a water supply. Consequently, the capacity development strategy will not be expected to deal with these emergency situations.
- A chronic pattern of non-compliance will often serve as an indication that a water system lacks TFM capacity. Failures to monitor, frequent recurrences of coliform bacteria in the distribution system, variations in water quality leaving treatment facilities and other symptoms of this nature should trigger an assessment of a water system's TFM capabilities.
- An overwhelming majority of violations of the drinking water rules occur in very small drinking water systems. Concern that prioritizing systems on the basis of population would result in an overall neglect of small water systems was alleviated by the knowledge that this size category would nearly always be the one chosen for assistance.
- The purpose of the prioritization scheme was not to decide which systems would or would not receive assistance, but was aimed more at determining the order in which systems would be given attention. Because the capacity development strategy will become an ongoing element of the State's drinking water program, it should be possible to eventually serve all systems that truly need capacity assistance.

IDENTIFICATION AND PRIORITIZATION

As a result of the considerations identified above the ranking scheme illustrated in the flowchart on the following page (Table 1) was developed. Systems would be chosen for attention under the strategy based on their compliance record as a first screening. A hierarchy of violation types, based on public health risk, was developed by the drinking water program

staff (Table 2). This hierarchy will be used to assign compliance problems to "critical" or "serious" categories. Once a system has been selected based on compliance and the relative seriousness of the problems of that system; they would be ranked according to population size. A final consideration in determining which systems to assist would be the willingness of the water system to cooperate with the State in addressing its problems.

The nature of the assistance offered under the capacity development program should be determined only after an assessment of the technical, financial, and managerial capacity of the water systems that are ranked highest. TFM capacity review could be accomplished by a self-assessment, by an "enhanced" sanitary survey carried out by the State, or by a third party evaluation conducted on site with the system's cooperation. Section C of this report discusses several of these assessment tools.

Table 1: Methodology For Prioritizing Systems Needing TFM Assistance

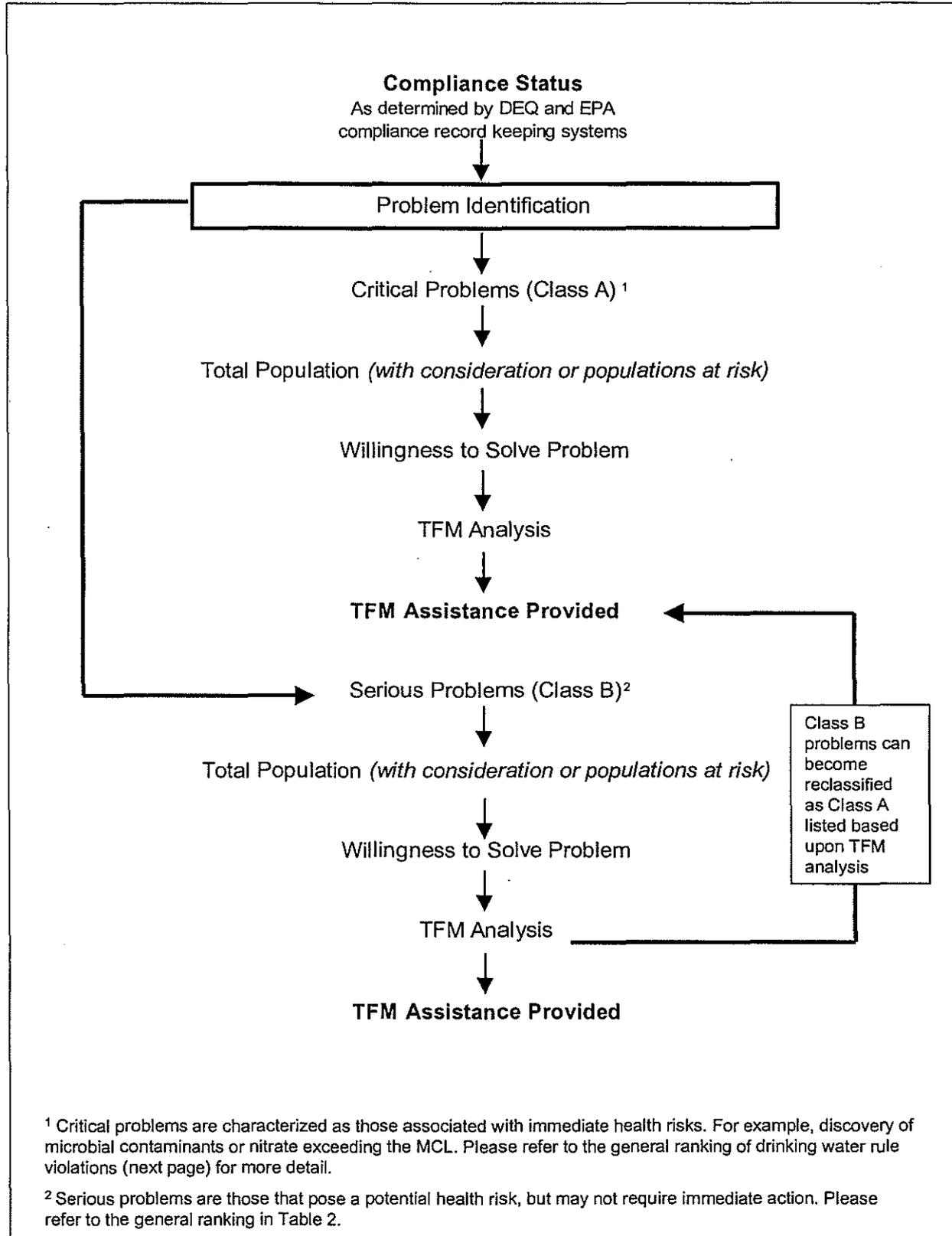


Table 2: General Ranking of Drinking Water Rule Violations by Level of Public Health Concern

Critical (Class A)	
1.	Coliform MCL (maximum contaminant level) with fecal organisms present. Nitrate detection above the MCL. <i>Poses immediate threat of illness.</i>
2.	Coliform positive sample(s) without fecal organisms present. <i>Indicates compromise of distribution system or possible treatment failure. Risk of illness or water borne outbreak if not diagnosed and corrected immediately.</i>
3.	Treatment technique violation for microbial contaminants – failure to filter surface water, failure to disinfect. <i>Exposes customers to water that <u>may</u> contain microbial pathogens. Potential waterborne disease outbreak.</i>
4.	Chemical detection above the "unreasonable risk to health level." <i>Usually associated with spill or other events generally outside the control of the water system. Emergency responses are invoked, such as trucking water or shutting down the affected source.</i>
5.	Failure to monitor <u>with</u> a history of violation(s). <i>Systems that fail to monitor <u>do not know</u> the quality of water they are serving. A system that monitors and experiences a contamination event is at least aware of the problem and can correct it promptly.</i>
6.	Non-compliance with reporting and record-keeping requirements <u>with</u> a history of violation(s). <i>These violations represent a lack of technical and managerial capacity, but do not necessarily imply a health risk. Proper reporting and record keeping are necessary for a well-operated and effectively managed system.</i>
Serious (Class B)	
1.	Failure to monitor <u>without</u> a history of violation(s).
2.	Chemical MCL exceedance. <i>Involves chronic exposure to potential carcinogens. Must be corrected by treatment or provision of alternative water source, but does not pose an acute risk.</i>
3.	Non-compliance with reporting and record-keeping requirements <u>without</u> a history of violation(s).

SECTION B: FACTORS THAT ENCOURAGE OR IMPAIR CAPACITY DEVELOPMENT

BACKGROUND

Considerable attention was given to addressing Section 1420(C)(2)(B) of the SDWA Amendments of 1996. The Act requires each state to identify the factors that either encourage or impair the TFM capacity of public water systems. States are required to identify regulatory, financial, tax, and legal factors. A fifth factor category, "other," was added to capture issues outside of the prescribed categories.

The factors operating at the federal, state, and local level that impair or enhance water system capacity are presented in this section of the report. These factors were drawn from national studies, from the experience of Committee members, and from knowledge gained by the DEQ in administering the drinking water program over the years. The Committee identified 135 factors at the federal, state and local levels that are either enhancements or impairments to public water system TFM capacity. Table 3 itemizes the factors by major category.

Table 3: Federal, State and Local Factors That Affect Water System TFM Capacity

Factors	Enhancements	Impairments	Noted in Findings Report
<i>Institutional</i>	9	19	10
<i>Regulatory</i>	25	19	10
<i>Financial</i>	17	21	8
<i>Tax</i>	4	4	3
<i>Legal</i>	4	3	1
<i>Other</i>	2	8	1
Total	61	74	33

Capacity enhancement or impairment factors were identified for each of the key levels of government: federal, state and local. The purpose of this work was to point out for each level of government the issues that require the attention of intergovernmental partners. In some cases, the Committee has recommended that actions be taken at each level of government in order to improve the overall capacity of public water systems. Some recommendations are policy measures offered for consideration of the drinking water program's governmental partners.

Those factors that should receive special consideration in the drafting of the State's capacity development strategy are described in Table 7. For additional information about factors that were identified but were not specifically noted for the strategy, please refer to Appendix B.

1. *Federal Factors That Impair or Enhance PWS TFM Capacity*

Please note the specific recommendations to address impairments to capacity development that would be best implemented at the federal level through statutory, regulatory or other changes. These recommendations are noted in italic type.

A. Enhancements

Institutional Enhancements:

- Significant benefits are received by PWSs from the USEPA's investment in training, technical assistance and education programs offered to water systems through the DEQ, and EPA's various contractors, grantees, and partners. EPA's sponsorship of operator and system management training and education is a key enhancement to TFM capacity.

Regulatory Enhancements: None Identified for Inclusion in Strategy

Financial Enhancements:

- The establishment of the DWSRF, created to assist in the financing of capital improvements to public water systems, is an important new resource for building TFM capacity. Federal resources are authorized and appropriated by Congress for the establishment and enhancement of the DWSRF programs administered by the states.
- The DWSRF allows states to set-aside portions of the state capitalization grants for TFM capacity building. This is a significant source of resources for the states to fund programs for improving the capacity of public water systems.

Tax Enhancements: None Identified for Inclusion in Strategy

Legal Enhancements: None Identified for Inclusion in Strategy

Other Enhancements: None Identified for Inclusion in Strategy

Table 4: Federal Factors That Affect Water System TFM Capacity

Factors	Enhancements	Impairments	Noted in Findings Report
Institutional	2	4	1
Regulatory	5	2	1
Financial	6	4	3
Tax	2	0	1
Legal	2	1	1
Other	0	2	0
Total	17	13	7

B. Impairments

Institutional Impairments: None Identified for Inclusion in Strategy

Regulatory Impairments:

- The growing body of federal regulations and requirements present public water systems with compliance obstacles and challenges that may impair capacity. In addition, the prescriptive nature of drinking water regulations -- the "one-size-fits-all" nature of the regulations -- is an impairment to public water system capacity.

4 *Recommendation: In the promulgation of statutes, administrative rules and guidance, the federal government should continue efforts to streamline, condense and simplify rules and regulations to facilitate incorporation into state programs.*

Financial Impairments:

- Public water systems in rural areas (such as Idaho) are burdened by Federal Davis-Bacon Act requirements for payment of prevailing wage rates on construction projects financed by federal resources.

4 *Recommendation: In order to reduce project construction costs, and to maximize DWSRF resources, federal Davis-Bacon Act requirements should be waived for construction projects financed in whole — or in part — by the DWSRF.*

Tax Impairments:

- The current federal tax code is a disincentive to the consolidation of public water systems.

4 *Recommendation: Modification of federal tax code to permit the benefit of limiting tax liability by capturing accelerated depreciation expense for system(s) taken over through privatization or consolidation.*

Legal Impairments:

- Consolidation or privatization opportunities are limited in some cases because of pending enforcement actions against a system or systems being purchased.
- 4 *Recommendation: Resolution of enforcement actions or negotiation of compliance penalties could enhance opportunities for attaining compliance by removing disincentives to capable entities interested in taking over incapable ones.*

Other Impairments: None Identified for Inclusion in Strategy

2. State Factors That Impair or Enhance PWS TFM Capacity

State and local factors known to impair or enhance the capacity of public water systems are identified in the next two subsections of this report. Unlike the federal level factors, those that require the highest level of government attention, state and local impairments and enhancements can be affected by government officials in Idaho. The factors listed here are excellent candidates for consideration in the State's capacity development strategy. Section C of this Report of Findings includes proposals for programs and activities that could overcome state and local TFM capacity impairments.

Table 5: State Factors That Affect Water System Capacity

Factors	Enhancements	Impairments	Noted in Findings Report
Institutional	4	6	5
Regulatory	14	8	6
Financial	7	5	1
Tax	2	3	2
Legal	1	1	0
Other	1	0	1
Total	29	23	15

A. Enhancements

Institutional Enhancements:

- Public water systems in Idaho benefit from the information, education and technical assistance programs established by organizations such as the American Water Works Association, the Idaho Rural Water Association, the EPA's Environmental Finance Center, the Rural Community Assistance Corporation, the Public Utilities Commission and the DEQ. The commitment of these organizations to providing service and information to public water systems has created a strong matrix of assistance for regulated systems and a forum for partnerships to be developed between service providers.
- The State of Idaho's DEQ has assisted in the promotion of voluntary operator certification programs for public water system operators. With these voluntary certification mechanisms in place, Idaho is in an excellent position for a transition to mandatory certification program requirements (by the year 2002), which will help ensure that all water systems have the personnel necessary to provide safe drinking water to the public.

Regulatory Enhancements:

- The traditional regulatory oversight activities of the Idaho Public Utilities Commission (PUC) help to ensure that PUC-supervised PWSs have the TFM capacities to operate. This is because the PUC includes comprehensive review of financial capacity when evaluating the requests for rate increases by investor owned water utilities. The DEQ, in partnership with the PUC provides oversight of the technical and management capabilities of these public water systems.

Financial Enhancements:

- The State of Idaho has provided significant financial and administrative resources for the establishment of important sources of capital financing for water system improvements. The Drinking Water State Revolving Fund would not exist without the capitalization grant matching funds appropriated by the Legislature. Administration of the DWSRF is provided by the DEQ. Financial resources for water systems are also provided through programs administered by the Idaho Department of Commerce and the Idaho Department of Water Resources.

Tax Enhancements: None Identified for Inclusion in Strategy

Legal Enhancements: None Identified for Inclusion in Strategy

Other Enhancements:

- The provision of general information and education regarding TFM capacity and the relationship of capacity to compliance is an important enhancement. For example, organizations such as the Rural Community Assistance Corporation, the Idaho Rural Water Association and the Boise State University Environmental Finance Center provide statewide services for technical assistance, training and education. By emphasizing the need for TFM capacity, organizations such as these and others reinforce the relationship of TFM and successful operation of public water systems.

B. Impairments

Institutional Impairments:

- Multiple state agencies are involved in various aspects of the TFM affairs of public water systems. For example, both the Idaho Public Utilities Commission and the Department of Water Resources are concerned with the financial, management and source water supply issues of public water systems. Another example is that information transfer relies upon informal rather than formal channels. The Department of Commerce is involved with infrastructure financing issues. Within the DEQ, different programs impact the technical and management capabilities of regulated water systems. While informal working relationships exist currently, the lack of formal cooperation agreements and linkages between programs detracts from the optimal use of public resources for building TFM capacity in water systems.
- Improving TFM capabilities of public water systems will require additional resources for information, education and technical assistance programs. There is a lack of adequate funding for oversight activities in the financial and management capacity areas; the drinking water program does not have the resources and methods in place to adequately measure and assess the financial and management capabilities of public water systems subject to the TFM provisions of the SDWA. Current program resources and personnel are limited in this regard.
- The DEQ is responsible for assisting in the development of TFM capabilities and is also the enforcement agency. This dual role inhibits cooperation on the part of regulated systems. Modifications in DEQ interaction with water systems to reflect the agency's desire to build capacity through partnerships with the regulated systems could overcome this barrier.

Regulatory Impairments:

- Due to the complexity of drinking water system requirements, some water systems may have incomplete information about the body of regulations regarding the provision of safe drinking water. The current volume of rules, regulations, requirements and guidance relative to public water systems is difficult to master, especially by the limited staff of small systems. Because of this fact, the information to be monitored by systems, and the fact this information is dynamic, systems with limited TFM capacity have trouble keeping up with regulatory changes.
- Historically, the impression of the regulated community, service providers and stakeholders has been that there is irregular and inconsistent review of public water systems, including enforcement proceedings when necessary. It is important to note that *this has not been the case where clear public health emergencies exist*. Capacity development is impaired when regulated systems believe that corrective actions on their part are not absolutely required. *DEQ's recent implementation of its compliance and enforcement strategy has already resulted in improvements in this regard.*
- Public water systems face regulatory oversight from multiple agencies. For example, "for-profit" water systems are regulated by the Public Utilities Commission, the Idaho State Tax Commission and the DEQ (or the District Health Departments as contractors for the DEQ). Current lack of formal coordination between these regulatory agencies is an impairment to capacity development.
- In the case of PUC-regulated public water systems, traditional rate making practices may have the unintended effect of discouraging long-term financial capacity in favor of short-term financial management and planning practices. Rate base regulation, a presumption of contribution of capital, general disallowance for reserve accounts, and the costs involved in filing rate cases may negatively affect the long-term financial and technical viability of regulated water systems.

- Current drinking water regulations are generally prescriptive. This is an impairment to the extent that they restrict the use of alternative processes for meeting the goals of public health protection. The establishment of performance based regulations for meeting drinking water rule requirements would be an enhancement to TFM capacity. Performance based standards would allow for lower cost technical solutions (when appropriate) to overcome compliance problems. Prescriptive, process-oriented standards are an impairment to achieving technical capability.

Financial Impairments:

- Except for those regulated by the PUC, public water systems are financially "self-regulated." For example, municipal water system operations are enterprise fund (fee and rate supported or "private business-like") activities regulated by elected officials. Constituent pressure often leads to rate structures incapable of sustaining long-term financial stability. Self-regulated systems generally receive no additional review and advice regarding the financing of operations, capital improvements, etc.

Tax Impairments:

- The current statutory restrictions on local government budgeting (i.e., property tax and budget limitations) have a direct effect on public water system finances. Revenue raising limitations negatively affect the successful administration of municipal fee and rate supported activities. State limitations on local budgets force an overall cap on municipal revenues, to the extent that water utility finances are in effect "commingled" with the balance of municipal government activities, instead of being allowed to be presented separately in accordance to municipal accounting standards. Local government taxation limitations have a direct and potentially negative effect on the long-term financial health of public water systems.

- The absence of production tax credits for water provision could be viewed as an impairment. Production tax credits, similar to those available to agricultural producers, would reduce the taxation liability of non-governmental water systems. The reduction in the tax liability would result in an enhancement of financial capacity by allowing taxes to be retained by the water system for capital projects, system upgrades or to lower the need for rate revenue.

Legal Impairments: None Identified for Inclusion in Strategy

Other Impairments: None Identified for Inclusion in Strategy

3. Local Factors That Impair or Enhance PWS TFM Capacity

Local factors that impair or enhance TFM capacity are identified in this subsection. Local factors that impair capacity should be logically addressed at the local level. The capacity development programs outlined in Section C are the suggested State-administered response to local impairments. Of the fifty-three factors discovered by the Citizens Advisory Committee, eleven are specifically recommended for consideration by the DEQ.

Table 6: Local Factors That Affect Water System TFM Capacity

Factors	Enhancements	Impairments	Noted in Findings Report
<i>Institutional</i>	3	9	4
<i>Regulatory</i>	6	9	3
<i>Financial</i>	4	12	4
<i>Tax</i>	0	1	0
<i>Legal</i>	1	1	0
<i>Other</i>	1	6	0
Total	15	38	11

A. Enhancements

Institutional Enhancements:

- Public education campaigns, including provision of Consumer Confidence Reports, could serve as catalysts for greater public involvement in water system issues. Citizen and customer awareness of TFM benchmarks and challenges could have the indirect benefit of creating broader acceptance of requests for financial resources necessary to maintain adequate TFM capabilities. Increasing general public awareness of the cost of providing safe drinking water is an institutional enhancement.

Regulatory Enhancements: None Identified for Inclusion in Strategy

Financial Enhancements: None Identified for Inclusion in Strategy

Tax Enhancements: None Identified for Inclusion in Strategy

Legal Enhancements: None Identified for Inclusion in Strategy

Other Enhancements: None Identified for Inclusion in Strategy

B. Impairments

Institutional Impairments:

- Water system customers seem to "take for granted" that safe drinking water is simple and inexpensive to produce. Generally, since service rates have been low traditionally, safe drinking water is both under-priced and under-valued. Recent surveys of the customer costs of drinking water indicate that Idahoans pay a low proportion of their household incomes for water. This institutional water-pricing situation makes it ever difficult for water systems to meet their full cost financing requirements when total costs of sustaining the water system are truly identified. Idahoans expect water to be provided at low cost regardless of system demands or regulatory requirements.

- For a variety of reasons, the majority of small public water systems employ flat rate pricing structures. Flat rate pricing is inherently inequitable where costs for serving different customer groups can be identified. While simple to administer, flat rate pricing can prevent customers from knowing the true cost of providing safe water and create consumption habits that strain the technical capabilities of aging or expanding water systems.
- Along with flat rate pricing structures, the lack of information about water usage, in effect an "unmetered supply" situation impairs water pricing and overall system management while straining the technical capacity of the system. This institutional impairment as with the other two above, create the impression that "running the water system" does not require rigorous attention to TFM capabilities.

Regulatory Impairments:

- There is a general failure of small public water systems to know and understand the complete body of statutes, rules and regulations governing their operations. General lack of technical and management capacity at the small system level translates into inability to understand and adjust to the myriad of changes in the regulatory framework governing the provision of safe drinking water.
- Current limitations in training opportunities in the area of SDWA statutes, rules, regulations and guidance are an impairment to the ability of public water systems to maintain management capacity necessary for continued compliance with drinking water requirements.
- Planning authorities are not currently required to specifically consider water system TFM capacities when planning for growth. This means that development decisions can be made without knowledge of the water service providers' TFM capabilities. In many cases, development decisions are completely independent of public water system information due to the separate operations of local planning authorities and private, not-for-profit, or municipal water systems. Land use statutes should be modified to reflect the need for consideration of TFM capabilities of all public water systems directly affected by potential (probable) land use decisions.

Financial Impairments:

- The lack of planning for current and future capital facilities is a significant impairment. Capital facilities planning has a direct effect on the TFM capabilities of smaller public water systems. The failure to recognize necessary future improvements to the technical facilities due to expansion or regulatory requirements often results in water systems being ill prepared to react to the need for financial resources necessary to construct and operate their facilities.
- Financial management capabilities are limited in many small public water systems. Staff and management teams need specific training and technical assistance to manage their financial resources and to protect the integrity of their water systems.
- The sheer number of small public water systems implies that many lack the economies of scale necessary to efficiently operate. Numerous systems would be in a better position to achieve compliance and to improve TFM capabilities if their customer bases were large enough to sufficiently finance current operations and fund future operations on a sustainable basis.
- Financial capacity of private and not-for-profit public water systems is compromised when the supply of capital resources necessary for system improvements is limited. There is a lack of capital financing resources for non-municipal water systems.

Tax Impairments: None Identified for Inclusion in Strategy

Legal Impairments: None Identified for Inclusion in Strategy

Other Impairments: None Identified for Inclusion in Strategy

Table 7a: Factors that Impair or Enhance Capacity at the Federal Level

Factors that Impair or Enhance Capacity at the Federal Level			
Factor	Description	Impairment	Enhancement
<i>Institutional</i>	Continue to facilitate education and train operators		Yes
<i>Regulatory</i>	Water quality program The constant changing of regulations – no flexibility, complexity of prescriptive regulations, “one size fits all”	Yes	Yes
<i>Financial</i>	SRF capitalization grants for the states Federal government allows set asides Continuation of a good bond market Loans and grants provided by SDWA Amendments Rural Development Assn. Loans SRF authorization Required to pay wage rates – increases cost (Davis Bacon) All needy systems will not receive funding National/international banks insensitive to local needs SRF appropriation	Yes Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes Yes
<i>Tax</i>	Acceleration of depreciation in takeovers Eliminated/Contributions in Aid of Construction (CIAC) related tax		Yes Yes
<i>Legal</i>	Takeover of systems that lack capacity discouraged by enforcement liability	Yes	

Table 7b: Factors that Impair or Enhance Capacity at the State Level

Factors that Impair or Enhance Capacity at the State Level			
Factor	Description	Impairment	Enhancement
Institutional	Information, education, technical assistance by DEQ, IRWA, EFC, AWWA, etc.		Yes
	Operator certification program		Yes
	Lack of coordination and transfer of information between and within agencies	Yes	
	State agencies – lack of adequate funding to provide adequate oversight/assistance, need more technical assistance training, no methods for periodic review of system capacity	Yes	
	TFM agency is viewed as an enforcement agency	Yes	
Regulatory	Performance based regulations		Yes
	Regulatory changes – complex requirements, knowledge of rules	Yes	
	Lack of timely review and enforcement	Yes	
	Not having the resources to carry out the regulatory programs effectively	Yes	
	Multiplicity of regulators – DEQ, PUC, Tax Commission – lack of coordination between regulatory agencies	Yes	
	Rate base regulation, presumption of contribution, no general allowance for reserve account, no equity, \$ required in filing rate case – legal, engineering, accounting, etc.	Yes	
	No influence on water system rate structure (except PUC systems)	Yes	
Grant process (time)	Yes		
Tax	Farmers get sales tax relief from items purchased to produce food – private water providers could get sales tax relief too		Yes
	Taxing limits	Yes	
Other	Information and education made available to operators and users		Yes

Table 7c: Factors that Impair or Enhance Capacity at the Local Level

Factors that Impair or Enhance Capacity at the Local Level			
Factor	Description	Impairment	Enhancement
Institutional	Newspapers could run a series of articles on the subject of the cost of safe water; Consumer Confidence Reports		Yes
	Historically Idahoans have paid little money or attention to water; now reluctant to change	Yes	
	Flat rates	Yes	
	Unmetered supply	Yes	
Regulatory	Failure to know statutes and rules and to enforce	Yes	
	Lack of training	Yes	
	Lack of consideration by planning authorities of water source availability – SE Boise Management Area also targeted growth area	Yes	
	Publication requirements process (time element)	Yes	
	Time to condemn – adds a cost	Yes	
Financial	Getting financing – especially for small systems; insufficient capital	Yes	
	Population of group is too small to afford increasing capacity	Yes	
	Lack of capital facilities management plans	Yes	
	Inadequate financial management	Yes	

SECTION C: RECOMMENDATIONS ON HOW THE STATE CAN USE ITS AUTHORITY AND RESOURCES TO HELP WATER SYSTEMS IMPROVE CAPACITY

Following its work of identifying and discussing the factors that encourage or impair capacity development, the Citizens Advisory Committee directed its attention to forming a set of recommendations for program elements designed to address the need for improving the TFM capabilities of regulated public water systems. The Committee's recommendations take into consideration the following:

- The program elements are suggested in response to significant TFM impairments and enhancements identified in Section B of this *Report of Findings*. These program elements represent efforts the State of Idaho, its cooperating local governments and public, not-for-profit and private partners can undertake to improve TFM capabilities.
- Generally, the impairments to TFM are problems that need to be addressed by public water systems regulators and the regulated community. The programs listed below are suggested to overcome TFM capacity problems in public water systems.
- The suggested program elements are presented without specific schedules for implementation or ranking. The purpose of this section of the *Report* is to present programs for improving TFM capabilities without regard to implementation demands. The program elements presented do not include specific recommendations regarding responsibility for implementation by the DEQ Drinking Water Program or other stakeholders. Ultimate responsibility for implementation of selected program elements remains with the DEQ as the primacy agency for the State of Idaho. However, it is expected that the DEQ will seek assistance from other stakeholders and service providers in improving the TFM capabilities of public water systems.

General Program Recommendation: Gather Data on TFM Capacity Needs

During the course of the Advisory Committee's work — especially in regard to Sections 1420(c)(2)(A) and 1420(c)(2)(B) — it became apparent that the DEQ needs to improve its data collection systems to gather and assemble better information about the TFM capabilities of Idaho public water systems. The DEQ needs to know more about the water systems it regulates in order to better identify those systems most in need of TFM assistance; to identify systems most likely to be serviced by the programs described below. While the agency has done an effective job collecting and reviewing technical information about water systems, the DEQ needs to collect comprehensive information about regulated water systems in the financial and management areas. Targeted TFM analysis will also permit the DEQ Drinking Water Program to better diagnose compliance challenges. Once diagnosed, the DEQ can best apply its resources (e.g., technical assistance, and regulatory enforcement) and the resources of cooperating partners in correcting water system problems.

TFM Program Elements

- Enhanced Sanitary Survey. DEQ should develop and utilize an *enhanced* sanitary survey that will permit DEQ field staff to periodically collect technical, financial, and management information about each of the State's regulated water systems. This information could then be used in a strategic sense to identify those water systems most in need of assistance to improve TFM capabilities.

- TFM Self-Assessment Tool. It is recommended that a self-assessment tool be developed and provided to public water systems. This tool could then be used by water systems prior to (or in the interim period between) a DEQ enhanced sanitary survey to identify strengths and weaknesses of TFM capability. The self-assessment tool would be based upon common criteria for TFM capacity similar to those used in the review of Drinking Water State Revolving Loan applications.
- Business Planning Guidebook. Several states require public water systems to develop and submit for agency review a water system business plan. However, many small water systems do not have information about the need for business planning or a resource or guide to constructing a business plan. Many problems associated with management capacity and financial planning could be offset through the implementation of water system plans, especially among the majority of private, not-for-profit systems. A business planning guidebook, provided to all public water systems by the DEQ would be an effective resource for building TFM capabilities.
- Change in PUC Regulation of Small Private Systems. The Idaho Public Utilities Commission is encouraged to examine whether its current regulation and oversight activities encourage the support and development of TFM capacities. Consideration should be given to identifying, recommending and /or implementing required changes in statutes and Commission rules. In addition, the PUC should consider changes necessary for regulated systems to meeting the capacity standards applicable to municipal and other self-regulated water systems. [Note: TFM information may need to be collected to demonstrate the need for PUC regulatory changes.]
- Water System Finance Training. Fiscal capacity and financial management are two of the key components of the financial capacity. Adequate funding of water system operations is essential to the current and future need to provide safe drinking water to the public. Annual review of rates is important to sustaining the fiscal health of the water system. Yet, the majorities of small water systems in the State of Idaho do not routinely review and adjust water service charges to keep pace with revenue demands. It is recommended that water system rate setting and financial management training and technical assistance be provided to water systems in order to improve financial and management capacity.
- Enforcement of Requirements for Use of Water Metering Devices. Achieving and maintaining technical capacity of a water system is closely tied to managing the water resources available for public consumption. The usage of metering devices at the water source (e.g., wellheads or intake manifolds) enable water system managers to track overall system capacity performance. Financing the water system depends upon customer charges based on individual water use. Water pricing based on volume usage can affect individual customer water use. Water systems that expect users to pay for what they truly consume are thus more economically and equitably managed. Given the direct relationship between full cost pricing of water and financial capacity, it is recommended that the State actively enforce its rules relative to water meter use.
- Education Campaign for Consumer Confidence Reports. Management accountability for the delivery of safe drinking water by public water systems will be improved through the provision of consumer confidence reports as required by the SDWA Amendments of 1996. This requirement as implemented will provide the general public with substantial information regarding the quality of their water. The State Drinking Water Program should be actively involved in an education campaign designed to heighten the awareness of the general public regarding the information contained in the consumer confidence reports.

- Handbook on Drinking Water System Statutes and Rules. The Idaho Drinking Water Program currently provides a technical assistance notebook to all regulated public water systems. It is recommended that a specific handbook on statutes and regulations relative to public drinking water systems be produced and distributed. The purpose of the handbook would be to provide "plain English" information on the Federal and State statutes, regulations, rules and guidance relative to the capacity requirements and all other requirements of the SDWA. The format should be both print and electronic; incorporating multimedia presentations. The key to the production and delivery of the handbook will be training sessions for water system operators, managers and customers.
- Incorporating Drinking Water Capacity Issues into Local Planning Activities. The identification of enhancements and impairments to capacity of public water systems prompted the Committee to investigate intergovernmental relationships that affect water system regulation and oversight. This led to consideration of the land-use decisions of local governments and how those decisions could encourage the proliferation of drinking water systems in the State. DEQ should act as technical resource to help cities and counties acquire the information they need to understand drinking water capacity issues and incorporate these in their planning efforts. This would include considering opportunities for consolidation of existing systems and assurance of adequate capacity in new ones. This is especially relevant in developments occurring in unincorporated areas adjacent the existing municipal, not-for-profit, and PUC regulated public water systems. Making better use of existing facilities when development occurs yield better economies of scale in water system operations.
- Loan Guarantee Program for Private Financing of System Improvements. Funding capital improvements to not-for-profit and privately owned public water systems has often required system owners to secure loans with their personal assets. The banking community often requires this collateral as risk protection for the provision of capital. Since current and future needs for capital resources will exceed the moneys available from the Drinking Water State Revolving Fund (DWSRF), the Committee believes that private capital resources should be better leveraged through the use of a private financing loan guarantee program. This program, secured through state appropriations, DWSRF interest earnings, or other means, would encourage commercial banks and other local lenders to participate in the financing of public water system improvements. The State of Idaho is encouraged, when implementing the proposed loan guarantee program, to give top priority in the use of the fund to those not-for-profit and private systems seeking to consolidate operations with other like-minded public watersystems. [Note: Innovative financing programs, such as "linked deposit" programs currently utilized by some states for wastewater facility financing should also be investigated for applicability for private, not-for-profit water systems.]

- Capital Facilities Management Plans. The long-term sustainability of Idaho's drinking water systems requires that they plan for investment in their physical facilities. Capital facilities investment maximizes the useful life of the public water system facilities and accommodates annual wear and tear in the existing system, systems expansions due to growth in the customer base and improvements required by new regulations. The DEQ should require public water systems to plan for this investment in their capital facilities by developing Capital Facilities Management Plans (CFMPs). These plans would combine both long-range capital budgets with accurate system inventory processes. The decision to provide assistance in the development of CFMPs may be triggered by the financial capacity assessment process which may be included in the sanitary survey of a PWS, an examination of TFM capacity relative to DWSRF loan applications, or non-routine inspection of a PWS due to compliance problems. For DWSRF applicants, CFMP should be required as either a prerequisite for loan applications or as a condition of DWSRF loan approval. The DWSRF should be considered as a source of funding for developing CFMPs.
- Proactive Distribution of Information. The State Drinking Water Program should provide information to public water systems that is proactive, accurate, and understandable. In running their operations like businesses, it is important for public water system managers to know about prospective changes in statutes and regulations that have a direct bearing on their TFM capabilities. There are benefits associated with water systems knowing about important changes in statutes and regulations; in providing operators, managers, board members and the customers with understandable time lines for regulatory implementation; and, for "common sense" interpretations and guidance on important public water system requirements.
- Programs for TFM Peer Review. The DEQ should establish and financially support programs that encourage local public water systems to build networks for peer review, information exchange, and sharing technical services. Because the DEQ is a regulatory agency, public water systems may not choose first to take advantage of Drinking Water Program assistance that is available. By encouraging local network forums where TFM capacity is discussed, water systems may improve their capabilities by simply interacting with their peers. Examples of potential TFM Peer organizations are; the chapters and regional organizations of the American Water Works Association, the Association of Idaho Cities and Idaho Association of Counties District organizations, the Idaho Rural Water Association, and the Idaho Building Contractors Association. In the case of private or not-for-profit water systems, the State may benefit from the creation of area-wide forums for TFM cooperation and networking.
- Improving Intergovernmental Relations for TFM Capacity-Building. The DEQ Drinking Water Program is not alone in building the TFM capacity of public water systems. For example, the Idaho Department of Commerce is actively involved in financing capital improvements for water systems around the State (financial capacity building). The Department also fosters board member training and leadership workshops for municipal and other special district officials (management capacity building). The State Fire Marshall is involved in enforcing local fire codes that impact water system operations (technical capacity). The Department of Water Resources is a key to systems accessing water for water supplies (technical capacity). Given the intergovernmental and interagency issues involved in providing safe drinking water, the DEQ should consider fostering on-going discussions relative to interagency responsibilities in overseeing drinking water systems. At every reasonable opportunity the DEQ should encourage cooperation among state agencies and between levels of government on matters affecting drinking water systems.

- Massachusetts-type Model Capacity Assistance Program. The DEQ may choose to utilize the Massachusetts-type model for matching capacity assistance service providers to needy systems in order to improve the TFM capacity of public water systems. In the Massachusetts model selected water systems are first examined to determine capacity deficiencies. Then, the Drinking Water Program, its contractors, or other service providers provide technical assistance. The function of "matchmaking" needy systems with technical assistance providers could reside with an Advisory Committee, which includes representatives of the variety of assistance providers in the State. A Massachusetts model program would have the greatest applicability in helping to solve chronic and multiple TFM capacity deficiencies (what are commonly consider to be "basket case" systems) in a number of small water systems every year. Idaho has already established a similar program for infrastructure financing through the Department of Commerce's Advantage Club.
- TFM Training for DEQ Drinking Water Program Staff and Contractors. In implementing its capacity assessment program for SRF and newly established public water systems, the California Health Services Division conducted four regional training events for its drinking water program staff, county health officers and Public Utilities Commission staff. The four two-day training events provided detailed information on TFM capacity and included hands-on case study exercises. In the short-term, the Idaho DEQ should prepare training materials and provide similar workshops for its central and regional office staff, Idaho PUC staff and District Health Department contract staff.

SECTION D: MEASURING THE SUCCESS OF IDAHO'S CAPACITY DEVELOPMENT STRATEGY

This *Report of Findings* offers the Committee's suggestions about how the Division of Environmental Quality might develop a strategy for improving the technical, financial and management capabilities of public water systems. In developing that strategy, the Advisory Committee suggests that DEQ measure the success of its capacity development efforts in three ways:

1. *Compliance Tracking*

In accordance with the prioritization scheme presented in Section A, the first criterion in selecting water systems for attention under the Capacity Development Strategy is compliance history-- the assumption is that a history of non-compliance reflects a lack of capacity. DEQ should consider tracking the compliance of systems that are chosen for assistance under the Strategy. Statewide trends in compliance, such as might be indicated by the triennial report to EPA on systems with a history of non-compliance, are complicated by a large number of contributing factors which may not relate to system capacity. System-specific compliance tracking will more accurately measure the effectiveness of the capacity building efforts carried out under the Strategy

2. *Outreach and Assistance*

The DEQ should keep careful records of assistance programs aimed at assisting water systems in improving capacity. The Committee has recommended a range of efforts of this kind in Section C of this report. Examples include, but are not limited to:

- a) Number of enhanced sanitary surveys or comprehensive performance evaluations conducted.

- b) Site visits for technical assistance (number and type of assistance rendered).
- c) Number of water systems that complete self-assessments of capacity. Comparison of assessments taken before and after receiving assistance would be particularly useful.

A count of the activities carried out under the Strategy is an indicator of the magnitude of the effort, but only indirectly a measure of effectiveness. Whenever possible, DEQ should follow capacity assistance efforts with some type of system specific assessment at a later date to determine if the assistance was effective and the results that were obtained had lasting value.

The Drinking Water Information Management System (DWIMS) would be a good place to track capacity assessments, assistance, and follow-up efforts. A consumer survey could be developed for use in soliciting feedback from systems that have received assistance under the Capacity Development Strategy. This survey would be mailed to the system within a few weeks of the time that assistance was given. Results from these surveys, and from other tracking activities, would be used to modify the Strategy over time, placing emphasis on those elements that are successful and trimming activities that prove to be less useful.

3. *Planning Activities*

The number of water systems which prepare capital facility management plans, business and/or financial plans or complete capacity self-assessments each year would be a good indicator of the success of the Strategy because it would reflect growing knowledge about and interest in capacity issues on the part of public water systems in the State.

SECTION E: PUBLIC INVOLVEMENT IN THE PREPARATION OF IDAHO'S CAPACITY DEVELOPMENT STRATEGY

The Citizens Advisory Committee is composed of representatives from a wide spectrum of interest groups. The interaction of Committee members and the merging of differing perspectives that took place during the Committee's deliberations combined to ensure that the group's *Report of Findings* would be balanced and comprehensive.

However, the Committee could not possibly encompass in its membership all organizations and individuals within the State who might have an interest in this subject. In its first meeting, the Committee examined the question of who should be involved in the preparation of a drinking water capacity development strategy. They concluded that certain key interest groups, beyond those already represented, should be encouraged to join the Committee if at all possible. Additionally, other interested persons or organizations should be asked to state their position, perhaps through an interview process or in a written form. Finally, the public at large should be engaged to the extent possible.

Initial Composition of the Advisory Committee

Appointees represented the following interested stakeholders to the Committee:

Representing the regulated community:

- Large public water systems
- Small public water systems

Professional associations and service providers:

- Well Drillers Association
- Consulting Engineers of Idaho
- Idaho Bankers Association
- Idaho Rural Water Association
- Pacific Northwest Chapter of the American Water Works Association
- Intermountain Chapter of the American Water Works Association
- Building Contractors of Idaho
- One privately owned water system with satellite management capabilities
- One organization representing child care providers

State agencies:

- Idaho Department of Water Resources
- Idaho's District Health Departments
- Idaho Public Utilities Commission
- Idaho Attorney General's Office

Federal and State elected officials:

- United States Senator Kempthorne's Office
- Congressman Crapo's Office
- Idaho State Senator Grant Ipsen, Chair Senate Health & Welfare Committee

An examination of this list reveals that most groups that would be expected to have an interest in the capacity development provisions of the SDWA were represented. It may also be seen that some of the groups fit into more than one category. For example, the membership of Idaho Rural Water Association is comprised of regulated water systems of all sizes. The Association is also a service provider. From land developers and well drillers to the financial community, various state agencies involved both in the development of new systems and the regulation of existing ones, the financial community, variously sized water systems, and elected officials — all were included. Some individuals represented more than one interest group. For example, representatives from municipal utilities in some cases also brought to the table the interests and perspectives of Idaho's certified water system operators. Several members also hold seats on the Drinking Water Advisory Committee, a permanent Committee that advises DEQ on a wide array of drinking water issues.

In spite of this inclusive membership, the Committee was able to identify a number of potentially interested groups or individuals that would add coverage to the group if they were to participate. These included representatives of residential trailer parks, the American Association of Retired Persons, Parent Teachers Organization, Fire Chiefs Association, the insurance industry, Idaho counties, and representatives of planning and zoning bodies at the county or city level.

Final Committee Composition

DEQ and EFC staff attempted to solicit involvement from the groups the Committee had identified. Unfortunately, not all parties were able to join the Committee in its work because of time constraints or other reasons. Some organizations placed the matter before their membership and concluded that they could not envision a clear role in the process for their group. Others agreed to examine the Committee's work and to provide issue analysis or position statements at a later date. The following changes in Committee composition resulted from this outreach activity:

- The DEQ Administrator appointed a representative from the Association of Idaho Counties to the Committee.

In addition, certain non-appointed participants began to attend Committee meetings and were able to contribute regularly to the group's deliberations:

- Idaho Manufactured Housing Association (residential mobile home parks and manufactured housing subdivisions)
- Idaho State Fire Marshal
- Rural Community Assistance Corporation
- Idaho Kids Count (a child advocacy group)

The following organizations agreed to participate in an interview process or to provide a position statement in response to the *Report of Findings*:

- Idaho Department of Commerce
- Idaho Parent Teachers Association
- USDA Rural Development

Other Public Involvement Initiatives

The Committee agreed that their recommendations should be presented to the public at large, with an opportunity for comments and suggestions. Accordingly, six workshops were held in major cities around Idaho in an attempt to obtain public reactions and input concerning the Committee's findings.

To encourage attendance, workshops were announced in DEQ's Drinking Water Bulletin (which is mailed to all public water systems in the State), the Idaho Rural Water Association Newsletter (on two separate dates a week or two apart), The Association of Idaho Cities Newsletter, and on DEQ's Internet home page. A copy of *The Executive Summary of the Findings Report* was also published on the Internet. Press releases were issued by DEQ's Public Affairs Office in late November. Boise State University also issued follow-up press releases immediately prior to the workshops in the northern and southern areas of the State. At least one radio station, in the Lewiston area, chose to broadcast the Boise State release.

A total of 47 persons attended the meetings. The largest groups were in Lewiston, Pocatello, and Twin Falls.

A two-question survey was attached to copies of *The Executive Summary of the Findings Report*. Attendees were asked to respond to this survey and mail it in a postage-paid envelope to the Environmental Finance Center at Boise State. Four surveys were returned. The comments contained in those surveys are reproduced below. Perhaps the reason that so few surveys were returned is that there were productive question and answer sessions at each of the workshops and these seemed to address virtually all of the concerns raised by participants. A fifth survey was completed during an interview with Mr. Dan Frazier of Rural Housing and Community Development Administration and his comments are also included in the following pages.

In addition to the comments which follow, there were some general themes recognizable in the dialogue that occurred at the workshops:

- People would like to see a loosening of the regulatory requirements for very small systems.
- Loans from the state revolving fund are not likely to address the needs of small systems; some kind of grant program appears necessary.
- Drinking water quality does not concern most Idahoans-- in the absence of documented waterborne disease outbreaks, people conclude that their drinking water is universally safe. Stringent regulation of drinking water is often believed to be unwarranted.

These same topics surfaced during the Advisory Committee's deliberations. Although they represent key issues, it is clear that they fall beyond the control of the State's drinking water program. Movement on any of these points can only occur in the political arena, largely at the national level. These factors were identified in the Committee's list of impairments or potential enhancements, and will be part of the information that proceeds to the US Congress as a result of capacity development investigations all around the nation.

Response to Public Comments

The two survey questions are repeated below in underlined format. The comments received are listed in bold print. They are quoted exactly as submitted by respondents. Each comment is followed by the Committee's response.

Question 1. In your opinion, which specific area of TFM capacity should receive special emphasis in the creation of the strategy?

"The technical area should include additional ability to utilize variance waivers from DEQ rules for small systems in isolated areas that don't pose health threats and in some instances would otherwise be an impairment over other options (30 wells, 30 septic systems) (small systems = 10 to 50 connections)."

Response: Waivers from the requirements of the safe drinking water act are not permanent exemptions and only apply to chemical contaminants. This respondent appears to be suggesting relief from all regulatory requirements for very small systems. This point surfaced repeatedly at the workshops, and was discussed earlier in this section as a general theme. There is no basis for the statement that small systems in isolated areas do not pose health risks. This respondent's remarks are addressed in the impairments and enhancements section of the report, and in numerous references elsewhere to the challenges faced by small systems.

"All three are important. Fundamentally, small community systems are disadvantaged in all areas -- I can't prioritize. However, I think more effective hands-on training and resources provided to small systems and their managers is a priority. Target who should receive what capacity building."

Response: Again, the *Findings Report* stresses small system problems throughout. The prioritization scheme provided in Section A of the report is the means by which systems most in need of capacity building will be identified and prioritized.

"We need a handbook identifying guidelines and requirements that must be met to stay in or obtain compliance. What are the benchmarks that must be reached."

Response: In Section C of this report, the Committee recommends that DEQ prepare a handbook on drinking water statutes and rules (page 20). Peer review programs, as discussed on page 21 of the report, are another means for helping water systems to understand what is required for ongoing compliance with the rules.

“Financial -- Rate schedules.”

Response: This comment is taken to refer to the need for water systems to understand prudent and business-like approaches to rate setting. The Committee has recommended that DEQ provide training on this and other financial topics (page 19).

“Institutional Programs -- Water Metering. The report states water-metering requirements in Idaho regulation should be enforced. I concur with this. Recent discussion with DEQ indicates the Division is considering relaxing this policy on metering in order to utilize more revolving loan fund monies. This is inconsistent with the TFM capacity concept and runs counter to sound water system management.”

Response: The Committee discussed this topic at length. The Idaho Rules for Public Drinking Water Systems presently require metering only at the well or source. The rules, which govern the administration of the state revolving loan fund, are more stringent in this regard, requiring systems that receive loans to install meters at each service connection. Experience with loan applications reveals that the metering requirement can generate costs that exceed those of all other repairs or upgrades needed by the water system. DEQ intends to consider a waiver of the metering requirement only under limited circumstances, evaluated on a case-by-case basis. Whenever possible, metering will be retained as part of the loan requirements. The recommendation for enforcement of the metering requirements is based on recognition of the simple fact that water systems are unlikely to be able to effectively manage their operations if they lack the ability to measure the quantity of water produced and delivered. However, it is acknowledged that circumstances will occur where economic realities make metering at each individual connection impractical. In those instances, DEQ should be able to relax the metering requirement. Other Committee recommendations in Section C would provide training for operators and system managers which should, over time, convince the majority of water systems of the benefits of metering.

Question 2. After seeing the presentation and reading the *Executive Summary of the Report of Findings*, do you have any additional ideas on how to build TFM capability?

“Better up front information when required from DEQ. DEQ must provide rules, policies, and interpretation of rules and policies. This

information must be shared with Health Department, engineers, developers, and concerned citizens. This has not been the case.”

Response: Several of the recommendations in Section C of this report speak to the concerns expressed in this comment. In the course of its work, the Committee has gained an appreciation for the complex nature of drinking water regulation. A developer, engineer, or private citizen who is encountering these requirements for the first time is almost certain to feel overwhelmed by them. DEQ shares its policies and interpretive materials with drinking water system operators and managers and with persons in the consulting community whenever possible. This report contains a recommendation on page 21 under the heading of “Proactive Distribution of Information” which addresses this comment.

“I don’t believe it’s realistic to expect a 10 connection system to comply with same requirements as 10,000 connection or greater system. Variances may be utilized as alternatives where safe.”

Response: This is a reiteration of the general theme discussed above: people would like to see a tiered system of regulations in which very small systems are held to lower standards. Variances are a limited and temporary measure that will not provide the relief this respondent is asking for. The U.S. Congress will be hearing this message from many sources in the years ahead.

“A major problem is linking infrastructure improvements needed to keep systems meeting growth and regulatory compliance with a local understanding of rate structure and capital facility planning. This is done ad hoc now. CEDA [Clearwater Economic Development Association] can assist in building a linkage.”

Response: A recommendation on page 19 of this report suggests that DEQ consider a “Massachusetts-style Capacity Assistance Program.” This approach involves a periodic round-table involving government and non-government organizations that have the potential to assist water systems with their problems.

“Additionally, I believe DEQ is disadvantaged as the regulatory agency that is now receiving millions of dollars in assistance for communities and doesn’t have a coherent mechanism to ‘solve problems.’ First there are ‘lists,’ the loan program isn’t marketed well and frankly how can

DEQ fulfill the project development mission of the SDWA funds? Again, I believe the EDDs [Economic Development Districts], like CEDA, could be a more effective 'middleman -- marketer -- developer -- administrator' than DEQ. The agency has its hands full simply fulfilling regulatory mission."

Response: This comment refers to matters that are outside the scope of Capacity Development, except in the sense indicated in the response to the comment immediately preceding this one. The allocation of roles discussed by this respondent is based on statutory directives and the mission of specific agencies. Cooperation is always a possibility, but a realignment of responsibilities would require legislative or other government actions that are beyond the control of the State's drinking water program.

"Stated grants to aid in 5-10 year plans for replacement of old wood/steel distribution systems."

Response: This comment is believed to be a reference to the general theme regarding a need for grant programs to address small system needs. Given a choice, water systems would inevitably choose grants over loans, in that improvements can be made without cost to customers. While such programs have their place, none that would affect drinking water systems are currently authorized or anticipated.

"Informational Programs -- Comment says 'DEQ should consider cooperating with counties and cities . . .' I recommend this statement read, 'DEQ will cooperate with counties, cities and nonprofit public water interest groups.'"

Response: The reference here is to land use planning decisions as they affect water system capacity issues. The report generally makes use of suggestive rather than imperative language because the Committee's role is to advise DEQ. The report attempts to state recommendations in clear and compelling terms that will encourage their adoption based on merit. As to "nonprofit public water interest groups," the report suggests the inclusion of non-governmental organizations in future capacity related efforts (page 22). The committee agrees with the substance of this comment, but believes the current wording is sufficient to make the point.

Section E Summary

The Citizens Advisory Committee believes that the efforts outlined in this section clearly represent a proactive process of public involvement. The Capacity Development Strategy that is ultimately implemented by DEQ will reflect a high level of stakeholder participation. One result to be expected from this is that the Strategy will have a strong practical emphasis, a careful approach to the use of public resources, and a well-defined mechanism for evaluating results.

APPENDIX A: IDAHO CAPACITY DEVELOPMENT CITIZENS ADVISORY COMMITTEE MEETING HIGHLIGHTS

The Committee met six times between April and September. A technical subcommittee was also created from interested Committee members to deal with the requirements of 1420(a), which deals with the language and issues of Idaho Rules for Public Drinking Water Systems. The Negotiated Rulemaking Subcommittee met a total of three times between June 17th and July 27th. DEQ and EFC staff conducted outreach meetings throughout Idaho during December to enable public review of the *Report of Findings*. During the month of January 1999 the final draft of the *Idaho Capacity Development Report of Findings* was prepared using input from Committee members, DEQ management, and public comments. The Committee met for the final time in January. There is a public record associated with these meetings. Persons wishing to obtain a more detailed record of the proceedings may do so by contacting the DEQ public information clerical staff at (208) 373-0314.

Highlights of April 9, 1998

A history of capacity development and the provisions of the SDWA, as amended in 1996, were presented to the Committee by Bill Jarocki of the Environmental Finance Center. Bill Chamberlain, Capacity Development Coordinator for EPA Region 10 spoke to the Committee regarding EPA's role in reviewing Idaho's capacity development program. Tom John of DEQ Drinking Water Program, explained to the Committee that the Attorney General's Office had advised DEQ that the State's drinking water rules needed to be revised to include explicit language supporting the requirements of 1420(a). He indicated that DEQ was planning to make these amendments to the drinking water rules through a negotiated rulemaking process, and asked for volunteers from the Committee. The Committee began an open discussion of item 1420(c)(2)(E), which asks the question, "Who should be involved in the preparation of Idaho's Capacity Development Strategy?" A list of organizations and interest groups was prepared.

Highlights of May 21, 1998

Bill Jarocki discussed the white paper that the EFC had prepared on the experience of other states in examining the factors that impair or encourage water system capacity. The discussion then turned to 1420(c)(2)(A), which is concerned with how the State will prioritize those water systems most in need of assistance under the capacity development strategy. Tom John presented an overview of the primary information sources at DEQ, as well as a discussion of sanitary surveys. Bill Jarocki pointed out that the criteria or methodology used by the State to prioritize systems for capacity building assistance would grow out of an evaluation of the technical, financial, and managerial data available at present. Various Committee members presented other information/suggestions that may be available from sources other than DEQ. In the matter of new system development, it was suggested that Idaho develop a checklist of regulator requirements that can be widely disseminated to help prevent new non-viable systems. The Committee discussed a number of schemes for ranking systems for capacity assistance. It was determined that the Committee needed additional information before finalizing their discussion of system prioritization. A discussion of 1420(c)(2)(B) then commenced. This element is concerned with the institutional, regulatory, financial, tax and/or legal factors at the federal, state or local level that encourage or impair water system capacity. Committee members agreed to fill out worksheets that would be sent to them as a homework assignment, and the responses would be discussed at the next meeting. Tom John provided an update on the notice of negotiated rulemaking for the "new system authorities." The success of efforts to contact interested parties, which had been identified relative to 1420(c)(2)(E), was presented to the Committee.

Highlights of June 18, 1998

The Committee continued their discussion of 1420(c)(2)(A), dealing with the methods that should be used to prioritize those drinking water systems that are most in need of capacity assistance. The EFC presented factors involved in health risk considerations and a brief overview regarding a procedure for setting up a health risk formula. Bill Chamberlain provided an update on new national developments affecting capacity development programs in the states. The Committee then continued their discussion of 1420(c)(2)(B). As the Committee reviewed these factors at the federal, state, and local level, it was suggested that they think in terms of suggested solutions for the impairments. These were written down on a flip chart and compiled for future use in the Committee's discussion of 1420(c)(2)(C), concerning how the State should apply SDWA resources and authorities in providing capacity assistance. Numerous factors from the homework assignment were discussed. A preliminary draft of the new system capacity rule was passed out.

Highlights from July 16, 1998

Tom John provided two handouts to the Committee. One of these was a ranking of violations of the drinking water rules as viewed by program staff. The violations given highest priority are those that involved immediate threats to human health, such as microbial contamination events. Lower ranking violations include chemical detections and reporting violations. The ranking should not be taken to imply that there are any trivial or unimportant violations. The other handout was a statistical breakdown of violations that occurred in Idaho during calendar year 1997. Bill Jarocki passed out a copy of the ranking scheme that the Committee had developed during the June meeting. Members of the Committee stressed the need to use the prioritization scheme in a dynamic fashion rather than as a recipe. A great variety of individual system circumstances need to be taken into account in determining which systems should receive capacity assistance first. The group agreed that drinking water staff should be empowered to employ common sense in this undertaking. Populations at risk should be identified and considered as well. The Committee then resumed discussion of 1420(c)(2)(B), the factors that impair or encourage water system capacity in Idaho. The results of the discussion of specific impairments

and enhancements will be summarized from the worksheets when this process is complete. Bill Jarocki suggested in the interest of saving time that the Committee allow DEQ and EFC staff to prepare an analysis of Item "D," which deals with how the State will track the progress of its Capacity Development Strategy. A concept will be presented to the Committee for review and comment. Tom John informed the Committee that the negotiated rulemaking meeting held the previous day had been very successful. However, a number of revisions to the rule language had been proposed and not yet incorporated into the draft rule. As a result, the rulemaking subcommittee will meet at least one more time before handing the rule over to the Committee at large.

Highlights from August 20, 1998

The Committee concluded its discussion of 1420(c)(2)(B) regarding factors that enhance or impair capacity development at the Federal, State, and local level. Those factors were then used to develop recommendations for 1420(c)(2)(C), the core of the strategy, which determines how the State should use the authority and resources of SDWA to improve capacity in drinking water systems. DEQ and EFC staff later used this information to produce 1420(c)(2)(D), which dictates how the State will track the Capacity Development Strategy. The Committee then discussed the language of the draft Rule concerning new system capacity checks.

Highlights from September 30, 1998

A draft of the *Idaho Capacity Development Report of Findings* was distributed to members of the Committee as well as to Idaho DEQ management. The Committee discussed the *Report* in great detail. The finalized version of the New System Authority Rule was also presented to DEQ management.

Highlights from January 21, 1999

The meeting of the Committee was dedicated to discussing the results of the public outreach workshops conducted in December. The Committee agreed to include the responses to the public comments in the final version of the *Report of Findings* to be submitted to DEQ managers. Dr. Gerald Conger was chosen by the Committee members to sign the *Report's* letter of transmittal on behalf of the group. Finally, the Committee approved the inclusion of a new appendix to the *Report*. The appendix is a detailed case history of a small neighborhood association water system, illustrating the TFM capability challenges faced by this type of public water system.

APPENDIX B: CAPACITY DEVELOPMENT ENHANCEMENTS AND IMPAIRMENTS NOT SPECIFICALLY INCLUDED FOR STRATEGY CONSIDERATIONS

Several factors were identified relative to enhancements and impairments to TFM capacity, which were not specifically included for strategy consideration in this *Report of Findings*. The tables in this appendix display these factors at the federal, state and local levels. The Citizens Advisory Committee considered all of these factors during its deliberations. In the final analysis, it was determined for a variety of reasons that the factors listed would not receive specific emphasis in this report. These reasons included the practical, operational, political and institutional barriers to addressing the impairments. The enhancements identified, while notable, were determined to need little or no practical action by the Drinking Water Program.

Persons reviewing these factors are invited to comment regarding any impairment and enhancement factors that they believe should be included for further consideration by the Division of Environmental Quality. For more specific explanations of any of the factors listed, please contact the Environmental Finance Center at Boise State University at (208) 426-1567.

Factors that Impair or Enhance Capacity at the <i>Federal</i> Level Not Noted in Findings			
Factor	Description	Impairment	Enhancement
<i>Institutional</i>	Reinventing of "Government"		Yes
	Historical areas slow installation	Yes	
	Washington's unrealistic views of rural states	Yes	
	Turf wars	Yes	
	Tradition – resistance to change	Yes	
<i>Regulatory</i>	Water quality program		Yes
	Reducing regulations to easily read and followed rules – writing rules in plain English		Yes
	Performance base regulations		Yes
	Monitoring relief where appropriate		Yes
	Explain the Federal rules to the operators in such a way that you gain their support		Yes
	Ever increasing testing requirements from EPA (makes it expensive)	Yes	
<i>Financial</i>	Continuation of a good bond market		Yes
	Loans and grants provided by SDWA Amendments		Yes
	Rural Development Assn. Loans		Yes
	SRF authorization		Yes
	All needy systems will not receive funding	Yes	
	National/international banks insensitive to local needs	Yes	
	SRF appropriation	Yes	
<i>Tax</i>	Eliminated/Contributions in Aid of Construction (CIAC) related tax		Yes

Factors that Impair or Enhance Capacity at the <i>Federal</i> Level Not Noted in Findings			
Factor	Description	Impairment	Enhancement
<i>Legal</i>	TFM requirement in new Amendments		Yes
	SDWA requirements – provides necessary oversight, and people would not do it if it was not required		Yes
<i>Other</i>	Resistance to Federal mandates	Yes	
	Information overload – not very organized	Yes	

Factors that Impair or Enhance Capacity at the <i>State</i> Level Not Noted in Findings			
Factor	Description	Impairment	Enhancement
<i>Institutional</i>	Idaho strategic planning requirement for agencies		Yes
	Development of a coordinated program to share data, review projects, ensure control points are implemented and provide training		Yes
	Failure of agency employees to educate purveyors and users every time they come in contact with them	Yes	
	Historical preservation requirements	Yes	
	Cultural – resistance to federal mandates, unfunded mandates, private property rights	Yes	
<i>Regulatory</i>	Regulatory assistance and education from agencies		Yes
	Training to operators		Yes
	DEQ new rules on TFM		Yes
	Idaho Department of Water Resources well rules and standards		Yes
	Fire code		Yes
	Plan and specification rules and construction standards		Yes
	Inter-agency cooperation		Yes
	Waiver program for undetected chemicals		Yes
	Permitting requirements		Yes
	Operator certification		Yes
	Source water assessments/protection		Yes
	Sanitary surveys		Yes
	Command and control	Yes	
Proscriptive regulations	Yes		
No required integrated resource planning	Yes		
<i>Financial</i>	State grants programs offered by the Idaho Departments of Water Resources and Commerce		Yes

Factors that Impair or Enhance Capacity at the State Level Not Noted in Findings			
Factor	Description	Impairment	Enhancement
<i>Financial</i>	Tax free bonds		Yes
	SRF to provide loans or grants		Yes
	Facilitate financing for small systems		Yes
	Financial resources to non-governmental organizations, such as the Idaho Rural Water Association, would be well spent – “this organization really helps at the grass roots”		Yes
	State Revolving Loan Fund/State match on SDWA, SRF set asides available for capacity development		Yes
	The Advantage Club – Department of Commerce organized funding agencies		Yes
	Grant process (time)	Yes	
	Difficult for small systems to raise capital	Yes	
<i>Tax</i>	Assets of water system generally not acceptable collateral	Yes	
	Borrowing only at premium rates	Yes	
	State appraisal of operating property for public utilities		Yes
<i>Legal</i>	Lack of incentives to improve systems	Yes	
	No incentives for takeover of non-viable systems	Yes	
	Simple, easy to follow laws would help		Yes
	Reluctance of legislature to ensure that agencies can enforce/implement laws	Yes	

Factors that Impair or Enhance Capacity at the <i>Local</i> Level Not Noted in Findings			
Factor	Description	Impairment	Enhancement
<i>Institutional</i>	Greater use of intergovernmental cooperation between cities and counties		Yes
	Developing partnerships between local purveyors		Yes
	Lack of coordination	Yes	
	Lack of staff	Yes	
	Belief that water should be both safe and inexpensive	Yes	
	Turf wars	Yes	
	Resistance to planning and land use issues	Yes	
	High number of very small systems – “We’ve always done it this way” attitude	Yes	
<i>Regulatory</i>	Plan review		Yes
	Zoning rules or ordinances		Yes
	Platting requirements		Yes
	Could simplify language we communicate in with water users		Yes
	Ability to use zoning authority		Yes
	Strengthening of certification process for emerging systems (New System TFM)		Yes
	Publication requirements process (time element)	Yes	
	Time to condemn – adds a cost	Yes	
	Lack of review and enforcement	Yes	
	DEQ and similar agencies cannot address the issues of domestic wells	Yes	
	Some cities license child care providers, others (most) do not	Yes	
	Reluctance of local governments to add regulations	Yes	
<i>Financial</i>	Growing population, more \$		Yes
	Some improvement may be required of developers		Yes
	Bylaws or other means of building a sufficient amount to build up reserve fund		Yes
	Extra financial aid to non-governmental service organizations		Yes
	Lack of resources	Yes	
	Difficulty passing bonds	Yes	

Factors that Impair or Enhance Capacity at the Local Level Not Noted in Findings			
Factor	Description	Impairment	Enhancement
<i>Financial</i>	Higher cost of development	Yes	
	SDWA requirements – testing expensive for small water systems	Yes	
	Heavy operating expense	Yes	
	Insufficient capital	Yes	
	Defaults and bankruptcy	Yes	
	Assurance that developer has adequate financial resources seldom obtained	Yes	
<i>Tax</i>	Franchise fees increase rates	Yes	
<i>Legal</i>	Developers are becoming accustomed to more requirements		Yes
	Lack of business knowledge or experience	Yes	
<i>Other</i>	Required continuing education – provide an opportunity for operators of various types of water systems a chance to inter-connect and learn from each other; regional planning authorities and Councils of Governments in place; trend toward privatization and regionalization; Consumer Confidence Reports		Yes
	Neglect – often forced to rely on general handyman for maintenance/repair rather than otherwise qualified engineer or trained operator	Yes	
	People that all of a sudden find themselves in the water business	Yes	
	Few local entities are prepared to explain full range of regulatory requirements for new or existing systems	Yes	
	Resistance to federal mandates	Yes	
	Private property rights	Yes	
	Unfunded mandates	Yes	

1998 WELL CONSTRUCTION PROJECT HAPPY ACRES HOMEOWNER'S ASSOCIATION

HAPPY ACRES HOMEOWNERS ASSOCIATION, GEM CITY, IDAHO

Happy Acres Home Owners Association (HAHOA) began a journey in March 1997. We were a very small water system that had experienced sand in our system when we tried to bring a back up well on line (Cost about \$10,000). We had three severe water outages during the spring of 1997; one lasted for four days. We had to replace our main pump every one or two years due to excessive sand wear. Last but not least, our Nitrate level was increasing every time we tested the water. Something had to be done.

It was decided that drilling a new well was a superior idea to refurbishing the old well.

We selected Acme Consultants Incorporated (ACI) to be our engineer, because at the outset, we did not have the expertise to run our system or even know who to call for help. We originally sought engineering assistance from ACI and hoped that upon completion they would either buy our system or operate it.

During the course of the project, ACI was reluctant to commit to buying us or operating our system. We continued to build the new system, however they ran hot and cold on their commitment to assist us when the project was completed. This attitude was apparently a change of policy within the company during the time that we were working on the project.

Upon the completion of the project we had gained two things, first we gained a very good system that is poised to operate successfully for many years. Secondly, we gained the expertise to operate our system effectively. We have compiled a list of vendors who have agreed to help us during routine situations and also be available during emergencies.

ACI has decided that they do not want to have us as a customer or own us. We have decided to operate the system ourselves. Below is a chronology of the situation as it developed and as it was brought to completion.

Project Chronology

1978 to 1984: First house completed in 1978. Community water system in place, the developer supplies water at no cost to the few homeowners out of Well # 1 with a 5-hp pump. Homeowners have nothing to do with the water system management and are charged nothing for water by the developer. The developer had dug Well # 2 and it had a 12" casing in place. It was not connected to the main water system that was in place with some main water lines as large as 6" in diameter

1984: Developer returns 24 out of 57 lots to the bank instead of foreclosure.

Bank has an auction and sells all 24 lots to individual buyers.

Developer deeds wells, pumps and common area to the property owners.

HAHOA incorporated and formed to receive the water system from the developer.

We had no experience, but we knew we needed to increase the capacity of our system.

Well # 2 needed to be activated before we experienced a water shortage. A driller was consulted, a plan was formulated and money was raised from the homeowners. No loan was applied for or sought. All 57 property owners were assessed \$775. Three-phase power was brought to the sight, a pump house was constructed, a 3,800-gallon storage tank was installed and a 30-hp pump was dropped into the well casing. Our only consultation was the well driller.

1984 to 1992: The board of directors of the HAHOA operated the water system using their limited knowledge and expertise. We had various minor problems that were solved using various vendors. We included \$4,000 annually in our budget for capital improvements.

Well # 1 was supported by a 5-hp pump that only supplied our 1-acre park with sandy irrigation water. It was not connected to our general water system.

Well # 2 was supported by 30-hp pump that supplied 40 + homes and two small parks at our eastern end.

1992 to 1997: We had to annually replace the pump in Well # 2 due to excessive sand wear.

On 4-21-92 our nitrate level was 4.06. It progressively increased to 5.97 on 12-17-97.

1994: We attempted to rejuvenate Well # 1 and bring it on line as a back up well. Consultation with a vendor resulted in the purchase and placing of a 10-hp pump in Well # 1. The 10-hp pump only made matters worse. We injected sand into our water distribution system that has taken us years to remove. Well # 1 was abandoned as a solution for a back up well. We were gaining experience, but our advice continued to be inadequate.

1994 to 1997: We attempted to keep the system operating using only Well # 2, but bad advice continued to plague us. Errors were made regarding the placement of check valves, the exact cause of our water hammer and the consequences of repeated water hammer. Subsequently, we had a waterline rupture between the pitless adapter and the nearest gate valve. During the spring of 1997 we had three serious water line ruptures caused by excessive vibration. We changed the number and location of check valves; we also installed a soft start mechanism that helped to solve our problems for the moment. Slowly, we were gaining expertise by consulting a variety of professionals and vendors.

Spring of 1997: It had become apparent that something had to be done to permanently to solve our water problems. Initially the idea was to repair Well # 2. The advice we obtained was not consistent. The final and correct decision was to drill a new well next to Well # 1, which would be officially abandoned.

My education regarding water rights, hydrology, government agencies, well drillers, plumbers, electricians and engineers was beginning. Approximately one year later I would receive my own imaginary degree as the well project was completed. I had actually become the general contractor of this project and didn't even know it at the time. Without advanced training I became the planner, the treasurer, the expeditor, the communicator, the prodder, the liaison with our board and not least of all, the ambassador between all concerned.

April 7, 1997: Contact was made the Idaho Water Resources Board (IWRB) who gave us information regarding our water rights and our options. We wanted to abandon Well # 1 and drill Well # 3 just 70 feet away from Well # 1. They agreed that this was within our water right. Well # 2 is one half-mile away and about 25' lower in elevation.

April 22, 1997: Contact was made with the Department of Environmental Quality. They gave me very helpful advice regarding the information that I must submit to the DEQ. They guided me in the submission of my application and what steps to take in obtaining the one waiver that was necessary from DEQ.

April 30, 1997: We met with a well drilling company. They helped us decide that construction of a new well was the more intelligent answer to our problem. We were favorably impressed with their interest, candor, professionalism and business-like manner. We came to the conclusion that we wanted them on our team.

May 9, 1997: I met with Acme Consultants Incorporated. I presented the overall problem to them, they acknowledged that construction of a new well was superior to refurbishing Well # 2. Following their assessment of the situation, we decided that it was the correct course to take and that we wanted them as our engineer. They provided us with a gratis cost estimate for the entire project that could be presented to

the homeowners at our annual meeting. Another engineering firm stated that the fee would be \$1,500 to prepare an estimate of the total cost of the project for presentation to our annual meeting.

July 9, 1997: ACI came out to our subdivision and assessed our situation in the field. Their conclusion was that our situation was even worse than we had led them to believe. Their solution: drill a new Well #3 in the vicinity of Well #1. Abandon Well #1 and use Well #2 only as a back up fire protection well.

The new Well #3 should be drilled about 300' deep and should end in a confined aquifer. It should have a bentonite seal extending down approximately 200' to a significant clay layer. It should also have a 50' stainless steel screen and a Colorado Sand pack preventing the introduction of immigrant sand into our water system.

July 10, 1998: The Happy Acres HOA Annual Meeting was held.

The board made a presentation to the HIAHOA outlining the situation and possible solutions:

1. Drill a new well now; approximate cost \$63,000, with a well assessment of \$1,200 per lot.
2. Drill a new well within 5 years.
3. Do not drill a new well now, but install a 10-hp pump along side our 30-hp pump.

In order to pass; 29 affirmative votes were necessary. The vote was 31 yes, 11 no votes.

There were 15 votes not in attendance. (We had 47 homes and 10 vacant lots, all had one vote).

The treasurer was instructed to bill all property owners \$1,200 for the well assessment and \$500 per home owner and \$250 per lot owner for annual maintenance. This gave us a budget of \$68,000 for the well and \$26,000 for the 1997-98 operational budget. Our homeowners paid their assessment in a timely manner.

At the time the project was approved by our HOA we had less than \$5,000 in our bank account.

A loan for the project was not considered an option. If a loan had been obtained through regular channels it would have been necessary for each board member to sign a promissory note and be held individually responsible for the total unpaid balance of the loan. No board member was willing to assume such an obligation.

No contracts were signed and all estimates and bids were agreed to verbally and paid to each vendor on the basis of work completed and changes requested.

July 22, 1997: ACI met with our board, outlined the project, and suggested well specifications plan of action.

Aug. & Sept. 1997: ACI could not decide if they wanted to take on this project. It was an internal policy discussion and decision. This put our plans on an indefinite hold. The situation was tentative.

Sept. 3, 1997: Received assurance from Idaho Power that they could service two 10-hp pump motors on the existing single-phase power. (They had previously stated that three-phase power at this location would cost us approximately \$25,000 to install, if we wanted to use a 30-hp pump. (We did not want a 30-hp pump.)

Sept. 4, 1997: Submitted application for a waiver, "Idaho Rules for Public Drinking Water Systems" Section 550-03a to the DEQ.

Sept. 22, 1997: Received waiver OK and Well Site Conditional Approval from the DEQ.

Sept. 23, 1997: Met with ACI and they outlined how I could assist them. They stated that all the legwork and procedures that I could perform would save our association their hourly fee if I was able to perform the tasks. They allowed me to talk directly with the driller.

Oct. 7, 1997: Met with DEQ and they answered numerous questions regarding procedures.

Oct. 23, 1997: Met with the driller, they answered many questions regarding the project and they refined and adjusted their bid to comply with the changes that had been made to date.

Oct. 27, 1997: Met ACI regarding configuration of the pumping and plumbing systems. They assigned me to collect and complete several items requested by DEQ.

Oct. 28, 1997: Received schematic diagram and cost estimate for the electrical system from the electrician.

Oct. 31, 1997: Delivered several requested items to DEQ. I thought I was expediting the situation, but these items were to originate and be completed by ACI.

Nov. 3, 1997: ACI submitted our Application for a Drilling Permit to IWRB.

Nov. 17, 1997: DEQ sent me a letter advising me that I had acted prematurely and that the DEQ requested items must originate and be signed off by ACI.

Nov. 18, 1997: Submitted an Abandon Well Application for Well # 1.

Nov. 26, 1997: Discussed the Nov. 17th DEQ letter with ACI and I supplied ACI with all the documents that I had in my possession that DEQ required.

Dec. 22, 1997: ACI finally submitted the required documents to DEQ for their approval.

Jan. 5, 1998: DEQ gave approval for the well drilling project with some Standard Conditions and some Project Specific Conditions.

Jan. 6, 1998: IWRB approved our Drilling Permit with drilling to start on 1-8-98.

Jan. 6, 1998: IWRB approved abandonment of Well # 1.

Jan. 8-15, 1998: Drilling well to 320'.

Jan. 16, 1998: Sand analysis by ACI.

Jan. 17-18, 1998: Installed 16" casing down to 200' level.

Jan. 19, 1998: Driller poured the bentonite around the casing down to the clay layer at 200'.

Jan. 23, 1998: Met with ACI to decide on the plumbing factors from the well to the water system.

Jan. 27, 1998: Installed 10" casing from 195' to 265'.

Feb. 4, 1998: Installed 50' of stainless steel screen from 265' to 315 plus a 5' tail pipe of 10" casing.

Feb. 9, 1998: Measure static water levels in the neighbor's wells.

Feb. 16, 1998: Met with ACI to organize plumbing specifications.

Feb. 17, 1998: Met with plumber to finalize plumbing plans.

Feb. 18, 1998: Pre-Pump Test, driller and ACI.

Feb. 20, 1998: Draw Down Test, driller and ACI.

Feb. 20, 1998: Water samples were drawn by ACI for submission to Analytical Labs.

Feb. 24, 1998: Letter from DEQ with revised piping design for the new well.

Feb. 27, 1998: Met with ACI regarding them operating our system and or purchasing our system.

Mar. 3, 1998: ACI instructs the driller on which pumps to order.

Mar. 13, 1998: ACI does a Down Hole Camera Study.

Mar. 18, 1998: A conflict developed between the driller and ACI regarding the design and use of a shroud over the two 10 hp pumps in the well. The conflict was resolved.

Mar. 24, 1998: I sent a letter to DEQ acknowledging a DEQ verbal change regarding the placement of check valves in the orders submitted to me in their letter dated Feb. 24, 1998.

Mar. 25, 1998: Trench (5' deep) dug between well and main water line by drilling company.

Mar. 27, 1998: Analytical Labs: Reported on the water samples drawn on Feb. 20th by ACI.

April 14, 1998: Dug trench between well and pump house for electrical connection.

May 5, 1998: Plumber installed plumbing between well and main water line.

May 5, 1998: Electrician connected well pumps to junction boxes in our pump house.

May 12, 1998: Plumber corrects poorly constructed thrust blocks.

May 13, 1998: Backhoe covers pipes partially and waits for completion of ACI pressure tests before filling in the entire ditch.

May 13, 1998: ACI ran pressure tests on the plumbing between the well and the main water line.

We would not allow them to pressure test at 250#/sq. in. Some of our buried pipe was not up to this standard.

They OK'd the tests with our modifications, 120#/sq. in.

May 13, 1998: Water is turned into our main line from our new Well # 3.

May 15 to June 30, 1998: The grassy park area around the well was killed with Round-up. The sod was tilled, leveled, and prepared for a new grass seeding.

June 1, 1998: We met with the driller and assessed that our Well # 2 would need to be completely re-drilled and reconstructed in order to serve as a 100% back up well. The following decision was made:

Continue to monitor Well # 2 according to DEQ standards. Adjust the pressure settings so that it would only start to pump water when the fire hydrants are turned on the maximum (in case of fire). Periodically start the pump to assure its operation. We have two 10-hp pumps in Well # 3 and we can get by in an emergency with only one of those pumps being operational.

June 30, 1998: New grass was hydro-seeded on the grassy park around the well.

Sept. 1, 1998: The park around the well appears to be back to normal.

Oct. 1998: Planted trees in the park.

Project Reflection

My advice to someone beginning a journey such as the one that we have just completed is to obtain the answers to the following questions:

- Do you have the majority of the users behind the project?
- Do you have adequate financing for the bid cost plus 10%?
- Cost of engineering services to provide an estimate to the organization?
- Cost of engineering services to completion?
- What engineering services will be performed and on what timetable?
- Who is going to be the project manager?
- Who is the communicator between subcontractors?
- Who deals with IWRB and DEQ?
- What does the engineer expect from you the owner/manager of the system?
- What is the engineer and driller's relationship?

I applaud the new Certified Operator of a Very Small Water System education. The average homeowner who assumes the responsibility of water master is poorly equipped for the job. Lack of experience and knowledge come to mind as the major pitfalls.

July 20, 2000

Mr. Bill Chamberlain
US Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, Washington 98101
Attn: OW-136

Excellent

Dear Mr. Chamberlain:

This letter is to transmit the Capacity Development Strategy for the State of Idaho, as required in Section 1420(c) of the 1996 Safe Drinking Water Act. The document has been improved by incorporation of language suggested by useful comments in your letter of June 28, 2000.

Attachment I provides a guide to the changes that were made in the Strategy following consideration of your comments. Although none of the changes are major, we feel that they improve the inclusiveness and readability of the document.

We wish to take this opportunity to thank you for being an active partner with us over the past two and a half years, beginning with the appointment of our Citizen's Advisory Committee in April of 1998.

We believe this Strategy will result in improvements in financial, technical, and managerial capacity in Idaho water systems over the next two or three years. However, it is important to recognize that this Strategy launches a long-term program, with its most significant benefits likely to become widespread and obvious only after a multi-year effort. An in-depth review of accomplishments will take place prior to reporting to Idaho's Governor in mid-2002. We hope that you will want to be involved in that process and in the ongoing implementation of this important initiative.

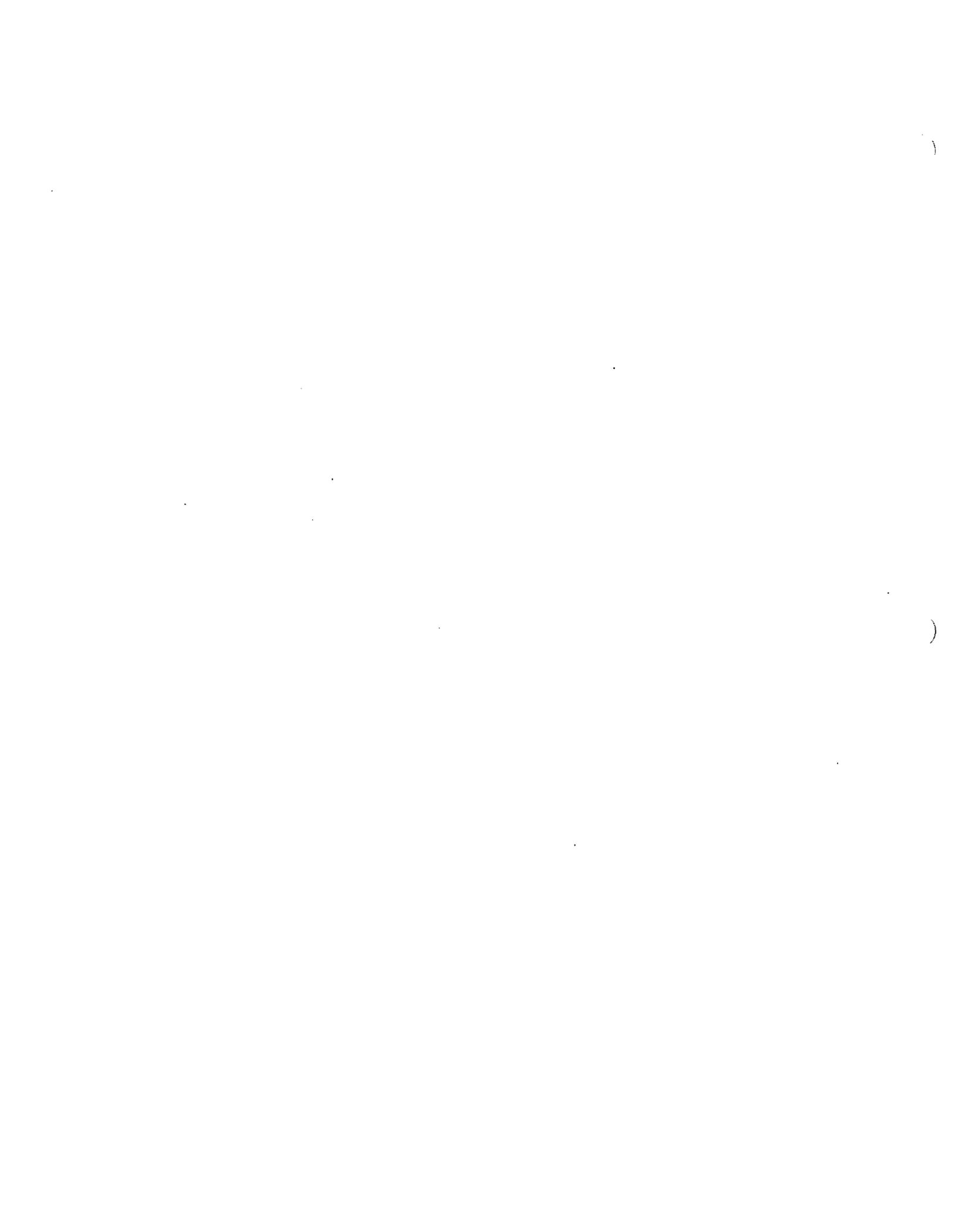
Please call Tom John at (208)373-0191 if you have any questions or need additional clarification on the enclosed materials.

Sincerely,

Lance Nielsen
Manager, Drinking Water Program

Enclosures: Attachment I- response to comments
Idaho Capacity Development Strategy, July 2000

cc: Capacity Development file
Mike Cox, Drinking Water Unit Manager, Region 10 w/o enclosures



Attachment 1-- Response to Comments on pages 2 and 3 of Bill Chamberlain letter dated June 28, 2000.

Section B. Added sentence on page 10, second paragraph of Section C.5 of the Strategy making it more explicit that the Citizen's Advisory Committee may indeed be reactivated, but only in connection with activities specific to the Strategy. For other advisory functions we will turn to the state's Drinking Water Advisory Committee, which has permanent standing.

Section C.2. Added a statement on page 13, second paragraph of Section 1.H. explaining that the impairments noted in the *Report of Findings* will be systematically revisited in connection with the assessment of performance and future directions that is expected to occur when we report to the Governor.

Section C.3. No editorial changes were made in response to the question about enticing drinking water systems to form partnerships. The state believes that there are cultural barriers to any overt initiative of this kind. We chose instead to weave the partnership theme into training programs and educational materials with the intent to introduce the concept as a matter of common sense rather than as a preference on the part of the regulatory agency. This important issue will be examined again in a couple of years.

Regarding partnerships with service providers, a sentence was added on page 11, third paragraph of Section E, which recognizes existing partnerships with those entities and the need to build enhanced working relationships in the years ahead.

The question of how the state plans to pursue item 7, dealing with "proactive distribution of new information", is thought to be sufficiently addressed in the brief descriptions of training programs and educational products. In addition, the comments in paragraph 1 of Section E describe an ongoing effort by the Idaho PWSS program to identify and marshal adequate resources for responsible growth in program staff to address the many new mandates associated with the 1996 SDWA. We feel that the success of this last effort is critical to being able to be more proactive in giving water systems early and thorough training on new rules.

Section C.4. Added a sentence under item 1, which lists the sources of capacity information mentioned in your comments.

Section C.4.3. DEQ does not plan on system specific assessments beyond the possibility of periodic surveys to determine the level of effort in the area of financial/capital planning. This may change in the future as the program resource picture clears and initial results of capacity development efforts are evaluated.





Information for States on Implementing the Capacity Development Provisions of The Safe Drinking Water Act Amendments of 1996

- Includes:
- Ensuring That All Community Water Systems and Nontransient, Noncommunity Water Systems Demonstrate Technical, Managerial, and Financial Capacity
 - Preparing Capacity Development Strategies
 - Assessing Capacity

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ACRONYMS

Acronym	Meaning
AMWA	Association of Metropolitan Water Agencies
ASDWA	Association of State Drinking Water Administrators
AWWA	American Water Works Association
CCE	Comprehensive Compliance Evaluation
CCN	Certificates of Convenience and Necessity
CCP	Composite Correction Program
CFR	Code of Federal Regulations
CIP	Capital Improvement Plan
CPE	Comprehensive Performance Evaluations
CWS	Community Water System
DEP	Department of Environmental Protection
DOH	Department of Health
DWSRF	Drinking Water State Revolving Fund
EPA	Environmental Protection Agency
FVT	Financial Viability Test
G&A	General and Administrative
MCL	Maximum Contaminant Level
MOU	Memorandum of Understanding
NARUC	National Association of Regulatory Utility Commissioners
NAWC	National Association of Water Companies

Acronym	Meaning
NCWS	Noncommunity Water Systems
NDWAC	National Drinking Water Advisory Council
NETA	National Environmental Training Association
NPDWR	National Primary Drinking Water Regulations
NRWA	National Rural Water Association
NTNCWS	Nontransient, Noncommunity Water System
O&M	Operations and Maintenance Cost
OGWDW	Office of Ground Water and Drinking Water
PUC	Public Utility Commission
PWS	Public Water System
RCAP	Rural Community Assistance Programs
RCW	Revised Code of Washington
RUS	Rural Utility Service
SDWA	Safe Drinking Water Act
SDWIS	Safe Drinking Water Information System
SRF	State Revolving Fund
TNCWS	Transient Noncommunity Water Systems
WAC	Washington Administrative Code

CHAPTER 1:

Introduction to Technical, Managerial, and Financial Capacity of Water Systems

What is water system capacity?

Water system capacity is the ability to plan for, achieve, and maintain compliance with applicable drinking water standards. Capacity has three components: technical, managerial, and financial. Adequate capability in all three areas is necessary for a system to have “capacity.”

What is water system capacity development?

Capacity development is the process of water systems acquiring and maintaining adequate technical, managerial, and financial capabilities to enable them to consistently provide safe drinking water. The SDWA’s capacity development provisions provide a framework for States and water systems to work together to ensure that systems acquire and maintain the technical, managerial, and financial capacity needed to meet the Act’s public health protection objectives.

How does the SDWA address capacity development?

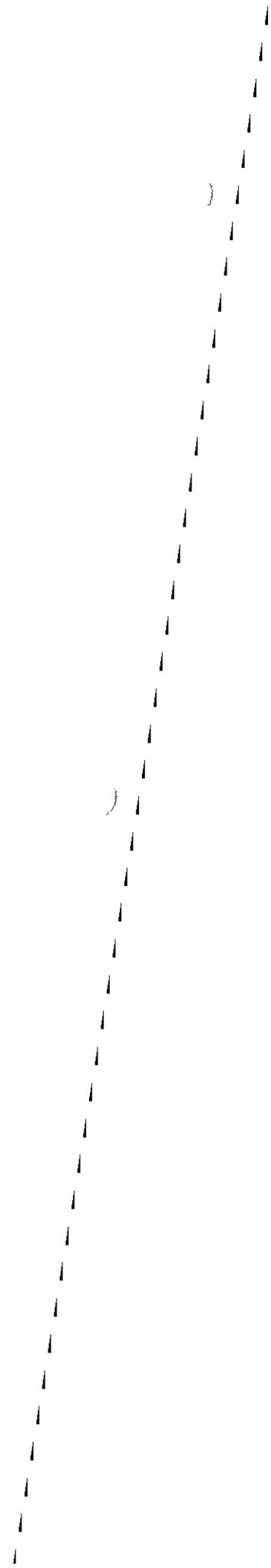
The SDWA as amended establishes a focus on capacity development through two major provisions. First the law requires States to develop and implement programs to ensure that new systems demonstrate capacity and to assist existing systems in acquiring and maintaining capacity. States failing to develop and implement such programs will have up to 20% of their DWSRF allotment withheld.

Second, the law ties a water system’s eligibility to receive assistance from a DWSRF to the system’s technical, managerial, and financial capacity. In short, the law prohibits DWSRF assistance to a system which lacks the technical, managerial, and financial capacity to ensure compliance with SDWA requirements. The only exception for systems lacking capacity is if they agree to undertake changes in operations, such as changes in ownership, management, accounting, rates, etc. These would apply if the State determines that the changes are necessary to ensure that the system has the technical, managerial, and financial capacity to comply with the SDWA over the long term. Section 1452(a)(3) establishes the prohibition on DWSRF assistance to a system lacking the capacity to ensure SDWA compliance unless the system agrees to restructuring changes to ensure it has the necessary technical, managerial, and financial capacity to comply with the Act over the long term.³

To which water systems do the SDWA’s capacity development provisions apply?

Section 1420(a), the new systems provision, applies to all new CWSs and all new NTNCWSs.

³ Section 1452(a)(3): *LIMITATION.- (A) IN GENERAL.- Except as provided in subparagraph (B), no assistance under this section shall be provided to a public water system that- (i) does not have the technical, managerial, and financial capability to ensure compliance with the requirements of this title; or (ii) is in significant noncompliance with any requirement of a national primary drinking water regulation or variance. (B) RESTRUCTURING.- A public water system described in subparagraph (A) may receive assistance under this section if - (i) the use of such assistance will ensure compliance; and (ii) if subparagraph (A)(i) applies to the system, the owner or operator of the system agrees to undertake feasible and appropriate changes in operation (including ownership, management, accounting, rates, maintenance, consolidation, alternative water supply, or other procedures) if the State determines that such measures are necessary to ensure that the system has the technical, managerial, and financial capability to comply with the requirements of this title over the long term.*



Section 1420(c), the capacity development strategy provision, applies to all PWSs, but States must consider which systems they will focus on.

Section 1452(a)(3), the prohibition of DWSRF assistance to PWSs which lack capacity, applies to all PWSs eligible for DWSRF assistance, which are CWSs, nonprofit NTNCWS, and nonprofit TNCWS.

What is a public water system (PWS)?

A PWS is a “system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least 60 days out of the year.” (40 CFR 141.2) This category includes community water systems (CWSs), nontransient noncommunity water systems (NTNCWSs), and transient community water systems (TNCWSs). There are approximately 172,000 PWSs nationwide.

What is a community water system (CWS)?

A CWS is a “public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.” (40 CFR 141.2) About 55,000 CWSs serve more than 246 million people.

Slightly more than 86 % of CWSs are “very small” (serving fewer than 500 persons) or “small” (serving fewer than 3,300 persons). Although a significant majority of CWSs, these systems serve just over 10 percent of the CWS service population. CWSs can be privately owned or publicly owned. A substantial number of privately-owned systems are “ancillary systems” they provide water as an ancillary function of their principal business. An example is mobile home parks, which provide water as an adjunct to their principal business. Fifty-three percent of CWSs serving between 25 and 100 persons are ancillary systems. Only 0.1 percent of CWSs serving more than 10,000 persons are ancillary systems. See Figure 1.

What is a nontransient noncommunity water system (NTNCWS)?

A NTNCWS is “a public water system that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year.” (40 CFR 141.2) NTNCWSs are generally commercial or institutional establishments having their own water supply which serves 25 or more of the same people on a regular basis. Examples include schools, factories, office and industrial parks, and major shopping centers. Approximately 20,000 NTNCWSs across the nation serve some 6 million people. Over 96 % of NTNCWSs use ground water as their primary source. Ninety-nine percent of NTNCWSs are “very small” or “small”. Most are privately owned.

What is a transient, noncommunity water system (TNCWS)?

A TNCWS is a “non-community water system that does not regularly serve at least 25 of the same persons over six months per year.” (40 CFR 141.2) TNCWSs are generally commercial or not-for-profit establishments having their own water supply which serves 25 or more people per day, but not the same people on a regular basis. Examples include restaurants, roadside stops, campgrounds, and hotels.

What is technical capacity, and how can it be assessed?⁴

Technical capacity is the physical and operational ability of a water system to meet SDWA requirements. Technical capacity refers to the physical infrastructure of the water system, including the adequacy of source water and the adequacy of treatment, storage, and distribution infrastructure. It also refers to the ability of system personnel to adequately operate and maintain the system and to otherwise implement requisite technical knowledge.

A water system's technical capacity can be determined by examining key issues and questions, including:

- *Source water adequacy.* Does the system have a reliable source of drinking water? Is the source of generally good quality and adequately protected?
- *Infrastructure adequacy.* Can the system provide water that meets SDWA standards? What is the condition of its infrastructure, including well(s) or source water intakes, treatment, storage, and distribution? What is the infrastructure's life expectancy? Does the system have a capital improvement plan?
- *Technical knowledge and implementation.* Is the system's operator certified? Does the operator have sufficient technical knowledge of applicable standards? Can the operator effectively implement this technical knowledge? Does the operator understand the system's technical and operational characteristics? Does the system have an effective operation and maintenance program?

What is managerial capacity, and how can it be assessed?⁵

Managerial capacity is the ability of a water system to conduct its affairs in a manner enabling the system to achieve and maintain compliance with SDWA requirements. Managerial capacity refers to the system's institutional and administrative capabilities.

Managerial capacity can be assessed through key issues and questions, including:

- *Ownership accountability.* Are the system owner(s) clearly identified? Can they be held accountable for the system?
- *Staffing and organization.* Are the system operator(s) and manager(s) clearly identified? Is the system properly organized and staffed? Do personnel understand the management aspects of

⁴ Additional information on technical capacity can found within *Information for States on Implementing the Capacity Development Provisions of the Safe Drinking Water Act Amendments of 1996*.

⁵ Ibid.

regulatory requirements and system operations? Do they have adequate expertise to manage water system operations? Do personnel have the necessary licenses and certifications?

- *Effective external linkages.* Does the system interact well with customers, regulators, and other entities? Is the system aware of available external resources, such as technical and financial assistance?

What is financial capacity, and how can it be assessed?⁶

Financial capacity is a water system's ability to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with SDWA requirements.

Financial capacity can be assessed through key issues and questions, including:

- *Revenue sufficiency.* Do revenues cover costs? Are water rates and charges adequate to cover the cost of water?
- *Credit worthiness.* Is the system financially healthy? Does it have access to capital through public or private sources?
- *Fiscal management and controls.* Are adequate books and records maintained? Are appropriate budgeting, accounting, and financial planning methods used? Does the system manage its revenues effectively?

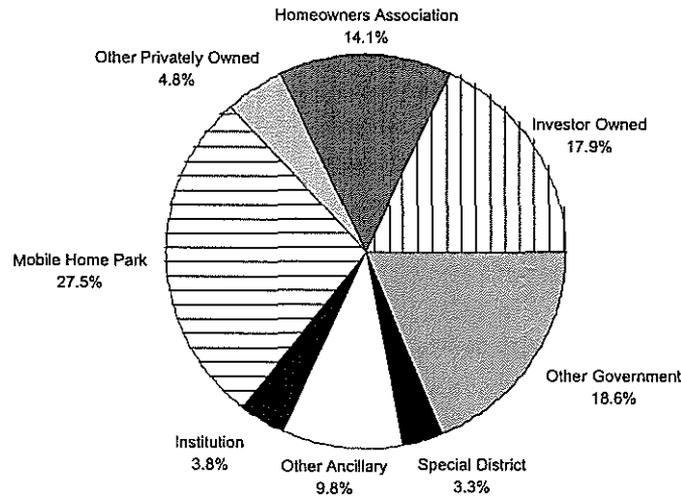
How are technical, managerial, and financial capacity related?

Many aspects of water system operations involve more than one kind of capacity. Infrastructure replacement or improvement, for example, requires technical knowledge, management planning and oversight, and financial resources. A deficiency in any one area could disrupt the entire effort. The relationship between the three areas of capacity is illustrated in Figure 2. Additional information on technical, managerial, and financial capacity and how they relate to one another can be found in *Information on Implementing the Capacity Development Provisions of the Safe Drinking Water Act Amendments of 1996*.

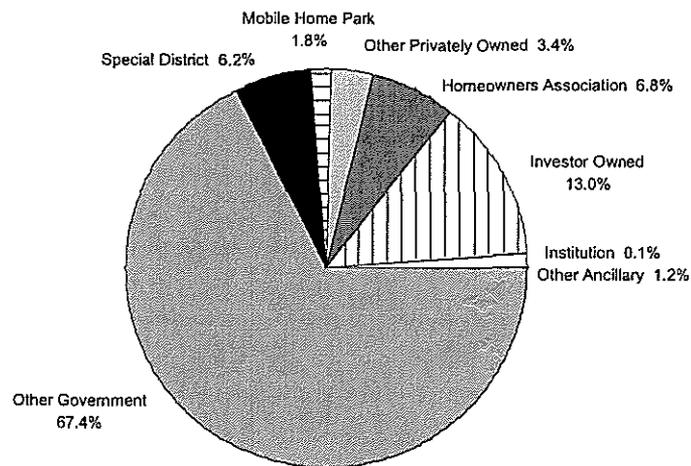
⁶ Ibid.

FIGURE 1

Ownership of Systems Serving Population 25 - 500
(Percent of Systems)



Ownership of Systems Serving Population > 500
(Percent of Systems)



Note: Percentages do not add to 100% due to rounding.

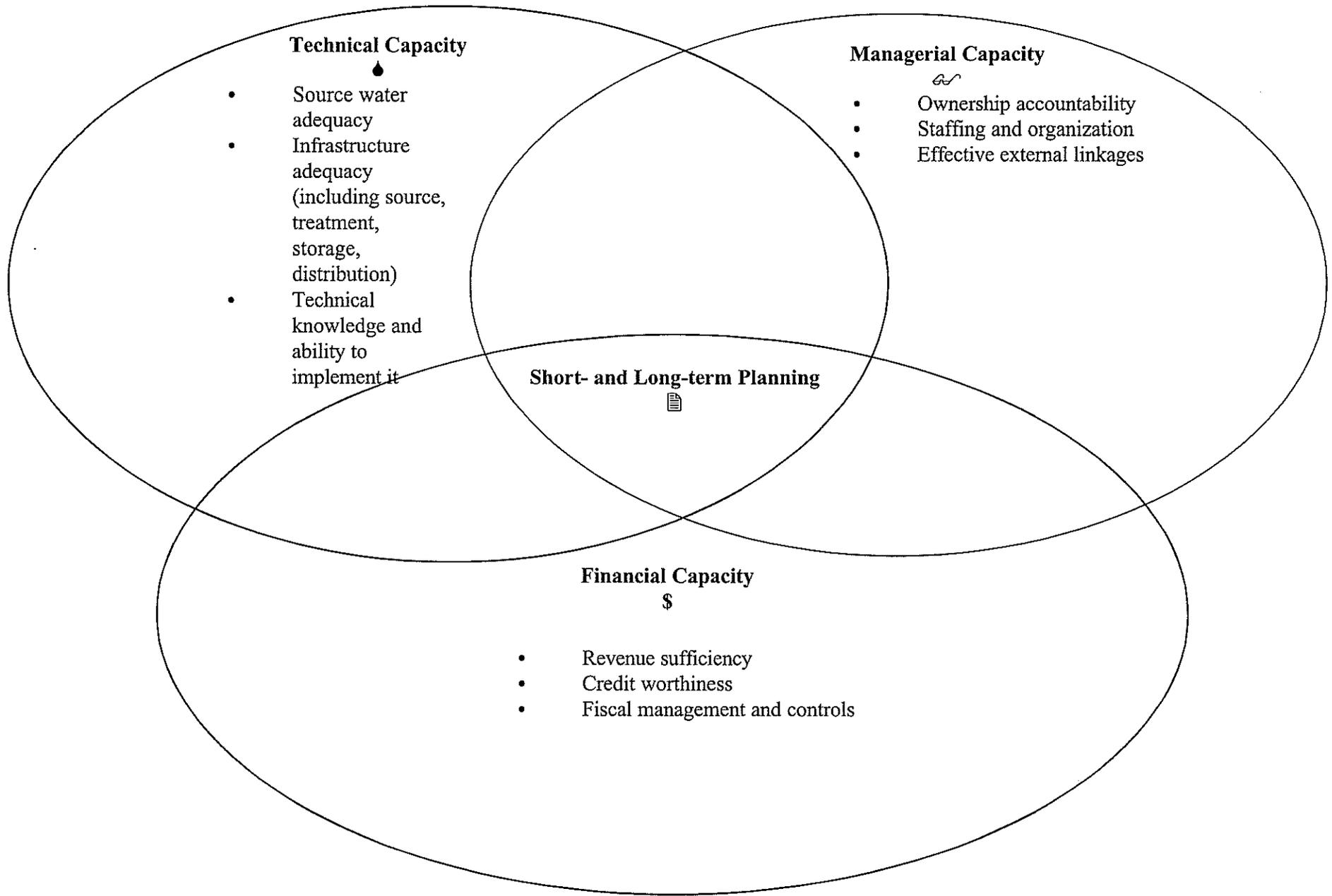


Figure 2
Technical, Managerial, and Financial Capacity

CHAPTER 2:

Ensuring That All New CWSs and NTNCWSs Demonstrate Technical, Managerial, and Financial Capacity



INTRODUCTION

SDWA §1420(a) directs the EPA Administrator to withhold a portion of a State's allotment under §1452 unless the State "has obtained the legal authority or other means to ensure that all new community water systems and new nontransient, noncommunity water systems . . . demonstrate technical, managerial, and financial capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect, on the date of commencement of operations."

Under this provision, a State must develop and implement a functional program to ensure that all new CWSs and new NTNCWSs beginning operation after October 1, 1999 demonstrate technical, managerial, and financial capacity. States should:

- Demonstrate a basis of authority for ensuring that all such systems show technical, managerial, and financial capacity. This authority could include State legislation, regulations, policies, or other implementing authorities that provide the State with the ability to intervene in the process of developing new CWSs or NTNCWSs to obtain assurances of technical, managerial, and financial capacity.
- Identify at least one control point. A control point is a crux in a new system's development at which a State (or other unit of government) can exercise its authority to ensure the new system's capacity. Although local governments can play an important part in the new system capacity-assurance process, each State must have one or more control points at which it directly exercises its authority.
- Present a plan for implementation of the new system capacity-assurance program.

The next section of this chapter provides an overview of State authority and associated control points. The third section discusses strategies that can be used to enhance State authority. The final section of this chapter reviews special issues that may arise when dealing with proposed NTNCWSs.

AUTHORITY AND CONTROL POINTS

Table 1 provides a summary of the types of authority and the associated control points where States can intervene in the development process to ensure new system capacity. Columns in the table provide the following information:

- A. **Basis of Authority.** Statutes, regulations, rules, or policies are typically the primary bases of authority for government agencies to ensure the technical, managerial, and financial capacity of new water systems.

- B. **Agency Vested with Authority.** The governmental agency with jurisdiction to make authoritative determinations about new water system capacity.
- C. **Control Points.** The specific points in the process of new water system development where agencies can exercise their authority to ensure capacity.
- D. **Type of Capacity Assessed.** Agencies can assess technical, financial, or managerial capacity of proposed new water systems. This column generalizes about the type of capacity assessed at each control point.

The authority vested in State and local governments varies substantially from State to State. Not every jurisdiction has adequate authority to ensure new water system capacity. Some may find it necessary to seek more explicit or additional authority from State legislatures.

This chapter discusses the following types of authority:

- State Authority for Drinking Water Quality
- State Authority for Economic Regulation of Public Utilities
- State Authority for Water Resource Management
- State Authority for Revolving Loan Funds
- State Authority for Planning and Growth Management
- State Enabling Authority for Local Government
- State Authority for Public Safety
- Local Governmental Authority For Land Use, Planning, And Finances
- Federal Rural Utilities Authority
- Interstate Authorities and Compacts
- State Authority to Regulate Related Businesses

The discussion following Table 1 provides an overview of each type of authority and the agencies and control points with which it is associated. States may consider which control points are most appropriate for assessing each component of capacity for new systems.



Table 1: Potential Authorities and Control Points for Ensuring the Technical, Managerial, and Financial Capacity of New Water Systems

A. Basis of Authority (Statutory or Other)	B. Agency Vested with Authority	C. Control Points for Ensuring New System Capacity	D. Capacity Assessed		
			Technical	Managerial	Financial
State Authority for Drinking Water Quality	State drinking water primacy agency	Facility plan review and permit*			
		Operating permit*			
		Operator certification			
		Construction requirements for wells			
		Source water protection plans			
		System planning requirements			
State Authority for Economic Regulation of Public Utilities	State public utility commissions (PUCs)	Certificate of convenience and necessity*			
		Approval of system's investments (ratebase)			
		Approval of system's financial structure (debt and equity)			
		Approval of initial rates and rate design			
State Authority for Water Resource Management	State water resource agency	System planning requirements			
		Withdrawal and source development permits*			
		Approval of water rights			
		Approval of environmental impact assessment.			
State Authority for Revolving Loan Funds	State financial assistance agency	Eligibility and approval of grants and loans			
State Authority for Planning and Growth Management	State planning, growth management, or development agency	Review and approval of plans*			
	Regional planning councils (intrastate)	Review and approval of plans			
State Enabling Authority for Local Government	Secretary of State (or other State agency)	Authorization of local governments and districts			
	State financial control agency	Subdivision and platting regulations			
State Authority for Public Safety	State fire marshal (or other agency)	Authorization of local government financing (public systems)			
Local Governmental Authority for Land-Use, Planning, and Finances	Municipalities, counties, and special districts	Permits and approvals related to fire protection codes			
		Subdivision, zoning, and land-use approvals*			
		Construction permits and approvals			
		Franchise approval*			
		Local planning approvals			
Federal Rural Utilities Authority	Rural Utilities Service	Authorization of local government financing			
Interstate Authorities and Compacts	River basin commissions	Approval of grants and loans			
		Basin withdrawal permits*			
State Authorities to Regulate Related Businesses	Basin planning and resource management requirements	Loan approval by commercial lenders			
	Banking regulators	Insurance approval by insurers			
	Insurance regulators				

*principal approval processes for creating a water system.

State Authority for Drinking Water Quality

State Drinking Water Primacy Agency

Implementation of SDWA's provisions, as well as implementation of State statutes, is generally vested in State primacy agencies. Their comprehensive jurisdiction makes State primacy agencies critical for ensuring new system capacity. Some States provide only the minimal authority required to carry out the SDWA, while others define the primacy agency's mission in terms of broader public health objectives. In recent years, some States have added capacity concepts to their statutes.

Within the broader function of water quality regulation, State primacy agencies exercise authority related to certification, technical standards, and planning. Control points implemented by State primacy agencies include:

- **Plan and specification review and/or construction permit.** State SDWA primacy agencies generally require a review of plans and specifications or a permit before construction can begin on a new PWS. The plan approval or permitting process itself presents the major control point in any new system capacity assurance program, affecting all PWSs and providing an opportunity to impose additional requirements and guarantees.
- **Construction requirements for springs and wells.** Some States may require new systems using groundwater resources to meet construction requirements for springs and wells. Meeting well-construction requirements may be a signal of technical capacity.
- **Operating permit.** In addition to approving plans and specifications and issuing construction permits, primacy agencies may grant a renewable operating permit. Primacy agencies also may grant licenses to operate ancillary facilities such as mobile home parks, nursing homes, and other supervised living facilities.
- **Operator certification.** A facility operator generally must be certified as technically competent. States vary in certification requirements for different categories of systems, as well as in the requirements related to the on-site presence of the operator.
- **Approval of source water protection plan.** Primacy agencies may require new systems to submit a source water protection plan. The ability to do so may signal technical as well as managerial capacity.
- **System planning requirements.** Primacy agencies may also require a comprehensive business plan or multi-year operating plan from new water systems above and beyond the basic facilities plan.

State Authority for Economic Regulation of Public Utilities

State Public Utility Commissions

Forty-five State public utility commissions (PUCs) regulate water utilities. The PUCs in Georgia, Michigan, Minnesota, North Dakota, and South Dakota do not have this authority. Commissions typically wield authority over investor-owned or private water systems, although commissions in several States have some authority over publicly owned systems.

Several State commissions have addressed water system capacity by conducting formal proceedings on small system policies (New York); developing and issuing policy statements (California, Connecticut, and Pennsylvania); and engaging in Memoranda of Understanding (MOUs) with sister agencies (Connecticut, Missouri, North Carolina, Pennsylvania, and Washington).

Within their broader role in economic regulation, State PUCs exercise authority related to certification, ratemaking, and planning. Control points implemented by the State commissions include:

- **Issuance of certificate of convenience and necessity.** Most PUCs require new water systems to obtain a certificate of convenience and necessity (or need) that establishes their service territory and places other conditions on service. PUC approvals or certificate modifications may be required for extensions of service to new developments outside the original service territory. PUC certificates can be conditioned by the requirement of a performance bond or other financial guarantees.
- **Approval of system investments (ratebase).** Many PUCs can review the new water system's ratebase investments, either as part of the certification process or separately. Some commissions use informal benchmarks (e.g., investment per customer) to evaluate whether the investment in the system is sufficient to maintain financial health.
- **Approval of financial structure.** Many PUCs can review the new water system's financial structure (e.g., its use of debt and equity instruments and its debt to equity ratio). Commissions also may require a business or financial plan focused on cost-of-service, financing, and rate issues.
- **Approval of initial rates and rate design.** Initial rates must be approved by the State PUC for all systems subject to ratemaking jurisdiction. Commission review generally focuses on whether rates adequately reflect the cost of providing service and properly balance the interests of investors and ratepayers. Rate design refers to the differentiation of rates based on class of service, amount of water used, period of use, and other factors.

- **System planning requirements.** The PUC role in planning varies and may be somewhat limited, even for investor-owned systems. Increasingly, however, commissions require some form of capital planning, as well as other types of system planning. Commissions also often play a review and advisory role in planning processes required by other State agencies. In some cases, PUCs may be asked to review financial aspects of plans prepared by utilities not under their jurisdiction.

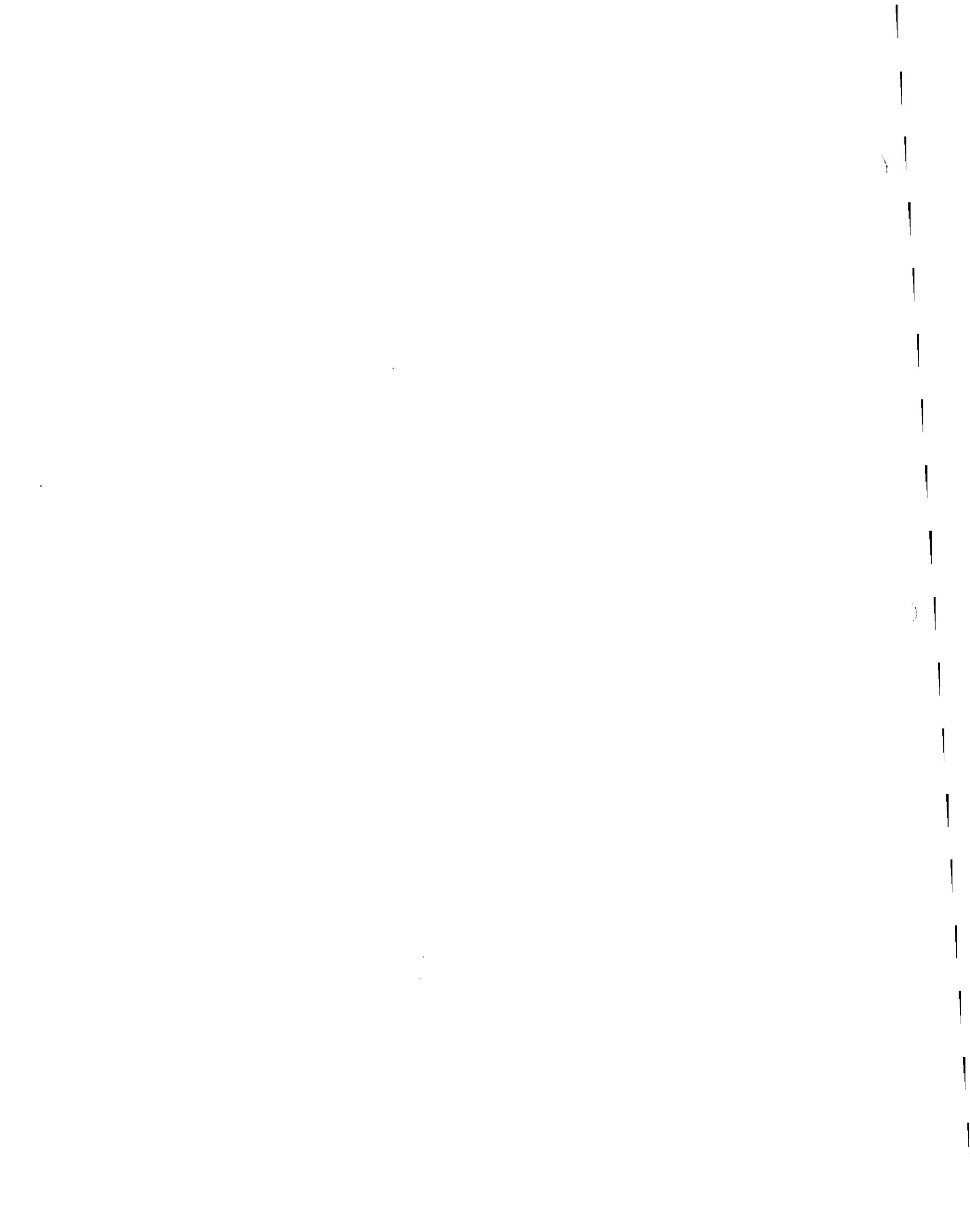
State Authority for Water Resource Management

State Water Resource Agency

The authority for water quantity regulation generally rests with State natural resource agencies (which may be identical to the primacy agencies). The authority of the water resources agency may derive from general environmental laws or separate statutes. The nature of authority over water quantity issues and the instruments of water resource policy (e.g., rights, permits, and registration systems) vary by geographic region and by State.

State water resource agencies exercise authority related to permitting, planning, and environmental resource management. Control points at which State authority is implemented by water resource agencies include:

- **Withdrawal and source development permits.** Access to a reliable water source is an obvious necessity for drinking water systems. Water resource agencies may have authority to approve proposed developments and withdrawals, water markets (sales and transfers), and supply management measures.
- **Approval of water rights.** In some States, a system of water rights governs access to and use of water resources. The State water resource agency may be involved in reviewing and approving water rights or transfers of water rights from one party to another.
- **System planning requirements.** Water resource agencies may be responsible for developing, encouraging, or overseeing development of Statewide, regional, or river basin plans for water use. Some resource agencies may require demand management and supply management measures.
- **Approval of environmental impact assessment.** Larger developments may require an environmental impact assessment. Impacts considered include ecological and social systems, and the benefits and costs of the proposed project. In this context, better planning and regional solutions also could be encouraged to address some environmental goals.



State Authority for Revolving Loan Funds

State Financial Assistance Agency

The State agency responsible for administering a State revolving fund (SRF), or other grant and loan program, can exert substantial authority to ensure new system capacity. Some States have established independent agencies for this purpose (e.g., PENNVEST in Pennsylvania). This authority focuses on financial capacity because of the need to ensure the prudent use of grant funds or the timely repayment of loans. The control point for State financial assistance agencies is:

- **Deciding eligibility and approving grants and loans.** Eligibility criteria used by the State financial assistance agencies can incorporate capacity provisions. Information needed to assess capacity can be obtained as part of the loan or grant application process.

State Authority for Planning and Growth Management

State Planning or Development Agency

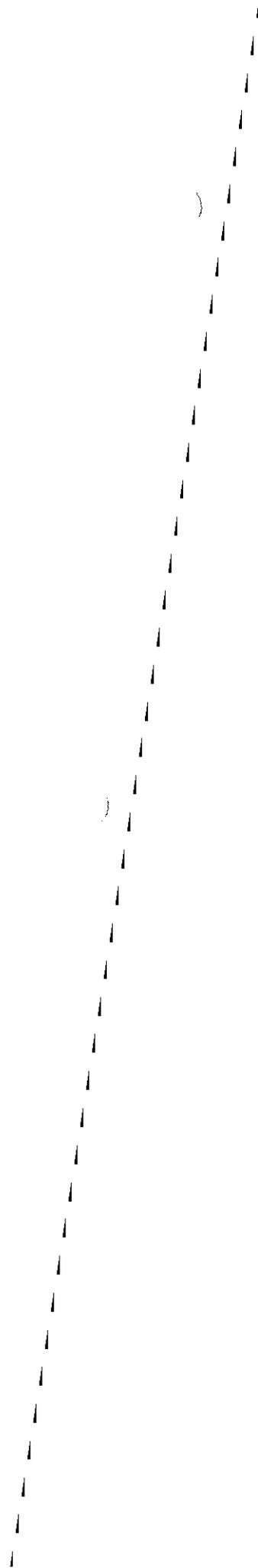
Water systems play a role in the growth and development of communities. Some States have planning, development, or growth management agencies authorized to promote better planning and growth management strategies. A few States have implemented Statewide regional planning processes for water supply (e.g., Maryland). The control point for State planning and development agencies is:

- **Review and approval of plans.** State planning agencies may be authorized to review development plans that include new water systems.

Regional Planning Councils (Intrastate)

Regional planning councils can act as comprehensive planning organizations and as special-purpose water resources planning bodies. In many instances, these bodies do not have significant authority to affect new system development, but they may have influence on the local and county governments within the region. The control point for regional planning councils is:

- **Review and approval of plans.** Regional planning agencies may be authorized to review development plans that include new water systems.



State Enabling Authority for Local Government

Secretary of State (or other agency)

State enabling laws define the powers and responsibilities of local government and can provide local government with an important role in the new water system development process. Enabling legislation may affect the formation of a new water system in a variety of ways. Control points in this area include:

- **Authorization of local governments and special districts.** Formation of a new local governmental entity, including special districts to provide water service, requires State authorization. Some States also have planning statutes of various types that confer special powers to local jurisdictions.
- **Subdivision and platting regulations.** In many States, land development is guided by local government subdivision and platting regulations. Local governments can exercise this authority through land development approval.
- **Authorization of funding (debt, bonds).** Local governments generally must have State approval to issue debt instruments, such as bonds, which may be needed to fund new systems.

State Authority for Public Safety

State Fire Marshal (or other agency)

The State Fire Marshal (or another agency vested with public safety responsibilities) may require water systems to meet fire protection standards. Potential control points at which authority is exercised by the State Fire Marshall include:

- **Permits and approvals related to fire protection codes.** Distribution systems for new water systems typically should be designed to meet fire protection codes. New systems might be required to submit engineering specifications related to water storage, pressure, fire hydrant locations, and various building codes.

Local Governmental Authority for Land Use, Planning, and Finances

Municipalities, Counties, and Special Districts

Local governments (municipalities, counties, and special districts) can play an important role in the creation of new water systems. Local governments can intervene very early in the creation of new systems. Specific procedures approving new developments are defined in local ordinances. Control points where local governments can exercise authority to ensure new system capacity include:

- **Subdivision, zoning, and land-use approvals.** Developers usually must obtain preliminary and final approval for subdivisions. The preliminary approval process is the most important control point because it usually occurs before the developer has made significant fixed commitments. Active local or county governments require sufficient planning information to evaluate the need for utilities, roads, and other services. Performance bonds also may be required.
- **Construction permits and approvals.** Local government can exercise authority through requirements such as building permits.
- **Franchise approval.** For many utility services, providers must obtain a franchise that defines the service territory and the terms of service. The franchise agreement can be negotiated and conditioned to help ensure capacity.
- **Local planning approvals.** Capacity-related questions are often raised during the local planning process. The extent to which local authority for planning is exercised varies. Some States have adopted a strategy of encouraging local water supply planning processes where feasible and developing other means of addressing new systems in other parts of the State.
- **Authorization of local government financing.** A new publicly owned system requires local approval of financing arrangements, such as the issuance of debt instruments.

Federal Rural Utilities Authority

Rural Utilities Service

Grants and loans from the federal Rural Utilities Service (RUS; formerly the Farmers' Home Administration) are a critical control point at which new system capacity can be addressed. RUS currently evaluates capacity when making loan and grant decisions.

- **Approval of grants and loans.** Capacity may be tied to the eligibility criteria and approval processes for grants and loans. Use of grants and loans also may be affected by various provisions and conditions.

Interstate Authority

River Basin Commissions

In a few river basin regions, interstate authority may be relevant to the development of new water systems. For example, the Delaware River Basin Commission has authority comparable to State water resource agencies. Federal interstate compacts, however, carry the force of federal

law and thus can preempt certain State policies. Interstate institutions and authorities may become more important as conflict increases over water resources. Control points exercised by river basin commissions include:

- **Basin withdrawal permits.** An interstate commission can require a withdrawal permit for water resources common to more than one State. These permits may be conditioned on a variety of terms.
- **Basin planning and resource management requirements.** An interstate commission can require supply management and demand management to ensure that only necessary withdrawals are permitted.

State Authority to Regulate Related Businesses

Banking Regulators

The States regulate the banking industry, which in turn makes loans to water systems and developers. A control point exercised by banks is:

- **Loan approval.** The loan eligibility and approval process can assess the financial capacity of applicants.

Insurance Regulators

The States regulate the insurance industry, which in turn provides insurance to water systems and developers. A control point exercised by insurance companies is:

- **Insurance approval.** The insurance eligibility and approval process can assess the financial capacity of applicants.

ACTIONS TO ENABLE OR ENHANCE STATE AUTHORITY

This section provides an overview of actions that States can take to 1) establish the necessary authority and control points to ensure new system capacity or to 2) enhance the effectiveness of existing authority. These actions can be used with several types of authority and control points. The actions are not mutually exclusive, but mutually reinforcing. The challenge is in designing a comprehensive, coordinated set of actions that best meets each State's institutional arrangements and capacity development needs.

The following actions are described below:

- Expand authority to add, strengthen, or coordinate control points
- Coordinate agency capacity efforts
- Enhance system approval processes
- Promote awareness of capacity issues
- Encourage interconnection, consolidation, or regionalization
- Strengthen new system capacity
- Require guarantees and assurances

Expand Authority to Add, Strengthen, or Coordinate Control Points

Enact Legislation Regarding Authority or Jurisdiction

A State should determine whether it currently has the authority to intervene prior to new system development to obtain assurances of technical, managerial, and financial capacity. State authority and the specific control points derived from it can be added, strengthened, and coordinated statutorily to ensure new system capacity. Another potential use of legislation is to expand the jurisdiction of agencies. Legislation can also be used to improve agency coordination and to specify when and how agencies will collaborate in joint efforts. For a State program to effectively ensure capacity, the State must have the authority to intervene prior to new system development.

Issue Rules, Regulations, and Policies

Some States may find that existing statutory authority provides sufficient basis for developing and clarifying new water system capacity policies through rules, regulations, or policy statements. Where adequate statutory authority exists, new elements can be added to application requirements by amending regulations or revising guidance manuals or application forms.

Enhance Capacity Assessment Resources

State capacity development efforts may require expanded engineering analysis and financial analysis capabilities within State agencies. Staff may need additional tools and training to conduct business planning and other activities. New staff functions might be created or outsourced. MOU can address sharing of personnel among agencies. In some States, for example, PUCs perform financial reviews for primacy agencies.

Agency resources devoted to capacity development will prevent future capacity problems, resulting in a net savings in State resources.

Coordinate Agency Capacity Efforts

Conduct Regular Meetings

Many States could coordinate their capacity development efforts by conducting regular meetings that include representatives of the agencies that have authority over water systems. These meetings can facilitate informal (e.g., information sharing) and formal (e.g., executive memoranda of understanding) means of coordination. Regular meetings allow agency personnel to craft and implement more effective capacity policies.

Formulate Interagency Policies and MOU

State agencies can formulate joint policies to direct their capacity development activities. These policies establish common goals and activities across agencies. The development of a formal MOU can greatly enhance coordination among State agencies. MOU typically include a joint policy statement or statement of objectives, a description of the specific areas where collaboration is envisioned, and the mechanics of the collaboration.

Some of the major mechanical issues addressed in MOU are coordinating information required of applicants to avoid duplication, streamlining application requirements, and ensuring consistent application evaluations by establishing evaluation criteria to be used by all involved agencies; sharing analytical resources and capabilities (e.g., one agency may have engineering capabilities while another has financial capabilities); coordinating decision making to clarify which agency decides first, whether one agency's decision is contingent upon that of another, or whether the multiple agencies need to act concurrently; and establishing a protocol for monitoring and evaluating the collaboration defined in the MOU.

Primacy agencies and public utility commissions in several States have developed MOU. In some cases, natural resource agencies also have engaged in the development of MOU. These agreements also could be drafted to include State financial assistance agencies, the RUS, and local governments.

Hold Joint Proceedings or Provide Testimony

Government agencies often have authority to conduct joint hearings with other agencies whose missions and interests are similar. This type of authority could be used to formally establish a consolidated approval process among the agencies responsible for water quality, water quantity, and economic regulation.

Another means of procedural coordination is to have personnel in one agency provide testimony at the hearings of another agency.

Share Data and Information Resources

The inaccessibility of relevant information is a significant barrier to effective review of new water systems. Economic regulators may have access to key financial information, while primacy agencies may have access to key technical information. Sharing information and developing a complete picture of a system's capacity may be difficult. New information-sharing technology (e.g., computer mapping) can enhance interagency communications and policymaking.

Clarify State and Local Roles

Successful capacity development requires clarification of State and local roles. While States are responsible for ensuring the capacity of new water systems, many critical control points exist at the local level. Well-informed, active local governments will achieve more efficient development practices and reduce the need for State intervention.

Where allowed by State law, States can delegate some of the responsibility for ensuring capacity of new systems to local government, provided that the arrangement is guided by clear written agreements. Local control points are most effective when coordinated with local approval processes and known and understood by new system applicants.

Enhance System Approval Processes

Conduct Preliminary Feasibility Meetings With Applicants

Some States encourage informal pre-feasibility meetings between developers and their engineers and State plan review and permitting staff. The objective is to discuss alternative approaches for providing service, in light of State requirements, as early as possible.

Develop a Standard Operating Procedure (SOP) for Approvals and Denials

A fragmented process of approving new water systems could be coordinated by developing a standard operating procedure (SOP) identifying critical authorities and control points and an optimal sequence of approvals. The SOP should be drafted with input from stakeholders, formally recognized in an MOU, and used by the counties and municipalities to coordinate State and local activities.

States may also want to develop a “disapproval” SOP in which alternatives to new system creation are recommended to applicants who cannot meet capacity requirements. Denial of an application does not preclude the State from providing the advice or technical assistance necessary for the applicant to later obtain approval.

Promote Awareness of Capacity Issues

Form a Stakeholder Group

State capacity development efforts can be enhanced by a formal process for stakeholder involvement. The key groups involved in new system formation are builders associations, realty associations, mobile home park operators associations, county associations, municipal associations, planning associations, consulting engineers associations, water industry groups (Association of Metropolitan Water Agencies (AMWA), American Water Works Association (AWWA), National Association of Water Companies (NAWC)), consumer advocates, environmental organizations, operators associations, and technical assistance providers (National Rural Water Association (NRWA), Rural Community Assistance Programs (RCAP)). While such organizations do not represent everyone, their communication networks reach a large percentage of the target audience.

Several States have convened advisory committees or task forces consisting of all relevant stakeholder groups and the relevant agencies of State government. Some of these groups continue to meet regularly to monitor and manage the implementation process. Some States have developed written communications plans to support program implementation. The plans identify objectives, specify the individual segments of the target audience, outline the messages and information to be conveyed to each segment, and itemize the options for delivering the messages and information.

Educate New System Applicants

New system applicants may be unfamiliar with State regulations and unaware of capacity development policies. Clear, early communications with new water system applicants (e.g., property developers) is an important aspect of capacity development.

Property developers can be important partners in ensuring capacity. One of the most significant hurdles in development is minimizing uncertainty. Once property developers begin to commit significant investment dollars, they need to have some confidence that they will be able to complete the development within a predictable period. Developers often will trade assurances of capacity for minimized uncertainty. This process will become easier as consulting engineers and local officials become aware of the importance of including capacity in decisions about development.

Educate Consumers and Communities

Educating consumers and communities can help bring market forces to bear on new system capacity. If home buyers know what to look for and how to recognize a well-conceived CWS, market forces may provide substantial pressure to ensure capacity. State and local governments should provide consumers with information and opportunities for public hearings related during approval processes.

Educate the Technical Community

Property developers may rely on many technical consultants to design and build infrastructure facilities. Engineering and other consultants should be made aware of capacity development issues and policies.

Educate the Financial Community

New water systems usually require support from the private sector, including the lending and insurance industries. Bankers and insurers can avoid potential liabilities by fully understanding water system capacity. Better-informed providers can exert their market power on the water industry to enhance capacity development efforts.

Encourage Interconnection, Consolidation, or Regionalization

Require Consideration of Regional Alternatives

The State approval process could include consideration of regional alternatives. Regulators may require a new system applicant to demonstrate that the proposed service area cannot be absorbed by a larger system or served by a line extension from a nearby system. Regional options could be considered for all or part of utility operations. For example, a system might run its distribution facilities, but purchase wholesale water from a regional supplier. Another system might maintain ownership but contract with a nearby utility for operations services. Washington State's water system plan requirement is one example of a State-sanctioned regional alternative.

Promote Regional Planning

Regional water system planning can promote capacity by providing efficient alternatives to creating new systems. Regional planning can link capacity development to other planning processes by providing opportunities for local governments to interact. For example, all new development in Maryland is authorized through county planning processes. The States can promote regional planning through grants and other incentives.

Establish an Interconnection Policy

Through policy statements, MOU, and other instruments, State agencies can establish interconnection policies to guide approvals and other determinations. A State-level interconnection policy requires coordination of existing policies that may or may not be consistent with regionalization goals. These policies include State natural resource agency determinations about water transfers, State public utility commission orders regarding acquisitions by investor-owned utilities, and local annexation policies and practices. Some States require serious consideration of interconnection with an existing system for all proposed systems.

Minimize Bypass Opportunities

A policy that requires customers in an enfranchised service territory to connect to the water system and stay connected, rather than draw from individual wells, can enhance capacity by reducing uncertainty and enlarging the customer base, making it possible to achieve economies of scale. Minimizing bypass also can improve regional environmental management by making it easier to monitor and control withdrawals, supply management, and source protection practices.

Modify Annexation Policies

Local annexation policies and practices may encourage inefficient growth and development, preventing annexation where it makes sense. State annexation policies might be modified to consider new system capacity. States can work with local governments to use annexation to promote regional solutions to water utility services.

Strengthen New System Capacity

Require a Comprehensive Business Plan

Requiring new water systems to provide comprehensive business plans (also called water system plans) may be one of the most important means of ensuring technical, managerial, and financial capacity. Planning is a diagnostic as well as a capacity development tool. Planning can be used to generate reliable information about costs and other issues needed to make sound decisions about a water system's future.

Some States already have the authority to require financial data. Other States have amended statutes and regulations to clarify authority to gather and use planning information. Several States have used this authority to develop processes for the evaluation of business and water system plans. Several States have produced technical guidance manuals for completing water system plans.

One issue in the implementation of a water system plan approach is the need for review capability at the State level. This review has two dimensions: engineering analysis and financial analysis. Engineering staff would be called upon to evaluate the engineering elements of the water system plan, and may need additional training. State review of water system plans also requires a method for comparing cost estimates submitted in the plans against standard cost estimates and actual operating experience (e.g., the PAWATER cost model developed by Pennsylvania and EPA).

For SDWA primacy agencies, the rationale for incorporating business planning into State approval processes is to protect public health and ensure safe, adequate, and reliable service. From the State PUC perspective, the rationale is to increase service reliability and affordability. Local governments use water system planning to ensure that new infrastructure is conceived in a sustainable manner, providing a stronger footing for economic development. For the consumer, water system planning means safe, reliable, and affordable drinking water.

Require a Technical Operations Plan

This approach relies on inherent public health authority to set expanded engineering standards for such topics as well construction (Minnesota), requirements for approval of surface water sources for small systems (Missouri), requirements for the frequent presence of a certified operator on the premises (Florida and South Carolina), specific operator certification requirements, requirements for system water rates, and management certification requirements.

Unexpected circumstances during the construction process can require that modifications be made to the original design specification. Thus the plans may not reflect the actual condition of the system “as built.” Details of the “as built” water system should be included with the overall plan once the system is operational. This precaution makes it much easier to identify and correct any technical problems that may occur.

The engineering and operations approach can be implemented with existing State primacy agency staff. While this approach provides a high level of insurance of technical and managerial capacity, the insurance of financial capacity is indirect. Standards are available for conducting engineering reviews, but States also have considerable room to exercise judgment if not fully satisfied with the adequacy of proposed plans. In most cases, the basis for exercising this judgment is the State’s legal authority to protect public health.



Develop Benchmarks or Minimum Standards

Under various authorities, agencies can develop benchmarks or minimum standards for screening proposed systems. For example, systems may be required to make a minimum per-customer investment or achieve a specified coverage ratio. While standards usually are developed formally, benchmarks often emerge from practical experience. Benchmarks and standards also can be used to monitor system performance.

Require Guarantees And Assurances

Provide Performance Guarantees

Performance guarantees provide specific remedies for a system's failure. Guarantees can be required of either the system developer or the local government authorizing the system's creation. Guarantees tend to emphasize financial protection and may take the form of performance bonds, letters of credit, guarantees from a parent company or affiliated organization, or operations contracts with reputable providers that include performance criteria. Some States (Maryland and Washington) require developers of new water systems to establish escrow accounts or reserves.

Ensure Takeover by Another Entity in Case of Failure

Ensuring the takeover of a failed water system can help guarantee that new systems have adequate capacity, while providing a solution if they do not meet performance expectations. Ensuring a takeover involves appointing a local government or another system as trustee or securing a commitment from the local government to annex, assimilate, or interconnect the system. One approach is to give some unit of sub-state (municipal or county) government responsibility for all water service within its purview. Therefore, if a new system fails, the sub-state unit is required to provide water to the customers served by the failed system.

New Jersey approves only municipal or investor-owned water systems, which forces local government to accept responsibility to provide service for new development unless an investor-owned system seeks to provide the service. In Connecticut and Washington, a local government that approves a new system prior to the State's viability review can be designated as the receiver if the system fails. Of course, the goal of capacity development is to avoid receivership and mandatory takeovers of failed systems.

Table 2 provides a list of specific actions that States can take to meet their objectives for enhancing State authority.

Table 2: Actions to Establish or Enhance Authority to Ensure the Capacity of New Water Systems

Objectives	Actions
Expand authority to add, strengthen, or coordinate control points	Enact legislation regarding authority or jurisdiction
	Issue rules, regulations, and/or policies
	Enhance capacity assessment resources
Coordinate agency capacity efforts	Conduct regular meetings
	Formulate interagency policies and MOU
	Hold joint proceedings and/or provide testimony
	Share data and information resources
	Clarify State and local roles
Enhance system approval processes	Conduct preliminary feasibility meetings with applicants
	Develop a protocol for approvals and denials
Promote awareness of capacity issues	Form a stakeholder group
	Educate new system applicants
	Educate consumers and communities
	Educate technical community (consultants)
	Educate financial community (lenders and insurers)
Encourage interconnection, consolidation, or regionalization	Require consideration of regional alternatives
	Promote regional planning
	Establish an interconnection policy
	Minimize bypass opportunities
	Modify annexation policies
Strengthen new system capacity	Require comprehensive business plan
	Require a technical operations plan
	Develop benchmarks or minimum standards
Require guarantees and assurances	Require performance guarantees
	Assure takeover by another entity in case of failure

ENSURING CAPACITY OF NEW NONTRANSIENT, NONCOMMUNITY WATER SYSTEMS

NTNCWSs serve schools, factories, office and industrial parks, major shopping centers, resort hotels, and other establishments that may be physically isolated from central water supply systems. Water service in these instances is an ancillary function. Many NTNCWSs are private, investor-owned establishments; some are publicly owned (e.g., schools).

Evaluating capacity in new NTNCWSs must be approached somewhat differently. This section reviews the major program elements discussed for CWSs, focusing on areas in which the approach to new NTNCWSs needs to be developed differently.

Legal Authority or Other Means

All of the local and county government sources of legal authority discussed for CWSs are relevant to NTNCWSs, but NTNCWSs may be more involved in zoning approval than subdivision approval. The authority of the State water resources agency and SDWA primacy agency still pertains, but the State PUC is unlikely to be involved. A technical operations plan review may be an effective means of ensuring capacity for NTNCWSs.

Adding the capacity assurance dimension for NTNCWSs to the traditional authority of State primacy agencies may require the same effort in developing regulations, guidance, or new legislation as for CWSs, depending upon existing statutory language and practices.

Control Points in the New System Development Process

Many control points relevant to new CWSs do not apply to NTNCWS (e.g., home buyers, developers, mortgage lenders), but local government and State agencies (except the PUC) still play important roles in the NTNCWS approval processes. In addition, the local government control point may be less effective with NTNCWSs than it is with CWSs. Therefore, State control points may be more appropriate in ensuring new system capacity.

Actions to Ensure Capacity of New Systems

In ensuring the capacity of new NTNCWSs, the full range of communication, coordination, and consolidation discussed for CWSs are also relevant. Technical assistance by States, the water industry, and the private sector also can be an effective way to develop capacity in NTNCWSs. However, capacity evaluations must be approached differently because the nature of the service provided by CWSs and NTNCWSs is different.

The fact that an NTNCWS is an ancillary service of a larger business or public enterprise could be interpreted to imply a performance guarantee by that larger business or enterprise. There is, in

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effect, more capacity implicit in the fact that the system will not have to stand financially on its own. Rather than attempt to obtain authority sufficient to probe the finances of private businesses or school districts, a simpler approach would be to formalize the implied guarantee, making it an explicit condition of the approval and stressing to the applicant that performance shortfalls can result in permit revocation, shutting the entire facility down. In this context, the State drinking water regulator is no different than the food service inspector, the building code inspector, or the fire marshall. This approach could be coupled with the engineering and operating standards approach to provide a high level of capacity assurance in approving new NTNCWSs.

CHAPTER 3:

Preparing Capacity Development Strategies Under §1420(c)(2) of the Safe Drinking Water Act

INTRODUCTION

SDWA §1420(c)(2) addresses the strategies developed by each State to ensure the technical, financial, and managerial capacity of PWSs under their jurisdiction. A State that does not develop and implement a capacity development strategy will receive only 90 percent of the DWSRF allotment it would otherwise receive in FY 2001, 85 percent of its scheduled DWSRF allotment in 2002, and 80 percent of its scheduled DWSRF allotment in each subsequent fiscal year.⁷

In developing and implementing a capacity development strategy, SDWA §1420(c)(2)(A-E) requires States to "consider, solicit public comment on, and include as appropriate" five elements:

- Methods or criteria to prioritize systems [§1420(c)(2)(A)]
- Factors that encourage or impair capacity development [§1420(c)(2)(B)]
- How the State will use the authority and resources of the SDWA [§1420(c)(2)(C)]
- How the State will establish the baseline and measure improvements [§1420(c)(2)(D)]
- Procedures to identify interested persons [§1420(c)(2)(E)]

In addition to considering these elements, §1420(b) requires States to "prepare, periodically update, and submit to the Administrator a list of community water systems and nontransient, noncommunity water systems that have a history of significant noncompliance and, to the extent practicable, the reasons for noncompliance." States are also required to "report to the Administrator on the success of enforcement mechanisms and initial capacity development efforts in assisting [those systems] . . . to improve technical, managerial, and financial capacity," by August 6, 2001. The list and the report must be included as part of the State's capacity development strategy to avoid the withholding of DWSRF monies, as stipulated in §1452(a)(1)(G)(i).

This chapter identifies some of the tools and resources that States could use to address the five potential programmatic elements listed above [§1420(c)(2)(A-E)] and discusses some of the ways in which they can contribute to the success of other parts of a State's drinking water program. When appropriate, this chapter also provides suggestions as to how the tools might be assembled to form a functioning capacity development strategy.

Due to the unique characteristics and circumstances of each State, the tools and strategies employed by States will vary. Therefore, each of the five potential programmatic elements is discussed individually.

⁷ See EPA, Office of Water, *Drinking Water State Revolving Fund Program Guidelines* (EPA 816-R-97-005, February 1997).



BUILDING A STRATEGY

As noted above, each State must consider, solicit public comment on, and include as appropriate five potential elements of a capacity development strategies:

- **Methods or criteria to prioritize systems.** [§1420(c)(2)(A)] These include methods or criteria that could be used to identify and prioritize PWSs most in need of improving technical, managerial, and financial capacity.
- **Factors that encourage or impair capacity development.** [§1420(c)(2)(B)] These include the “institutional, regulatory, financial, tax, or legal factors” that exist at the federal, State, or local level that encourage or impair capacity development.
- **How the State will use the authority and resources of the SDWA.** [§1420(c)(2)(C)] States should describe how they will use the authority and resources of the SDWA or other means to:
 1. Assist PWSs in complying with NPDWRs.
 2. Enhance technical, managerial, and financial capacity by encouraging the development of partnerships between PWSs.
 3. Assist PWSs in the training and certification of their operators.
- **How the State will establish the baseline and measure improvements.** [§1420(c)(2)(D)] States should describe how they will establish a baseline and measure improvements in the capacity of PWSs under their jurisdiction. This potential programmatic element provides the tools that State primacy agencies must have to produce and submit a report to their Governors on the efficacy of their capacity development strategy and progress made toward improving the technical, managerial, and financial capacity of PWSs in their State.
- **Procedures to identify interested persons.** [§1420(c)(2)(E)] States should identify and involve stakeholders in the creation and implementation of their capacity development strategy.

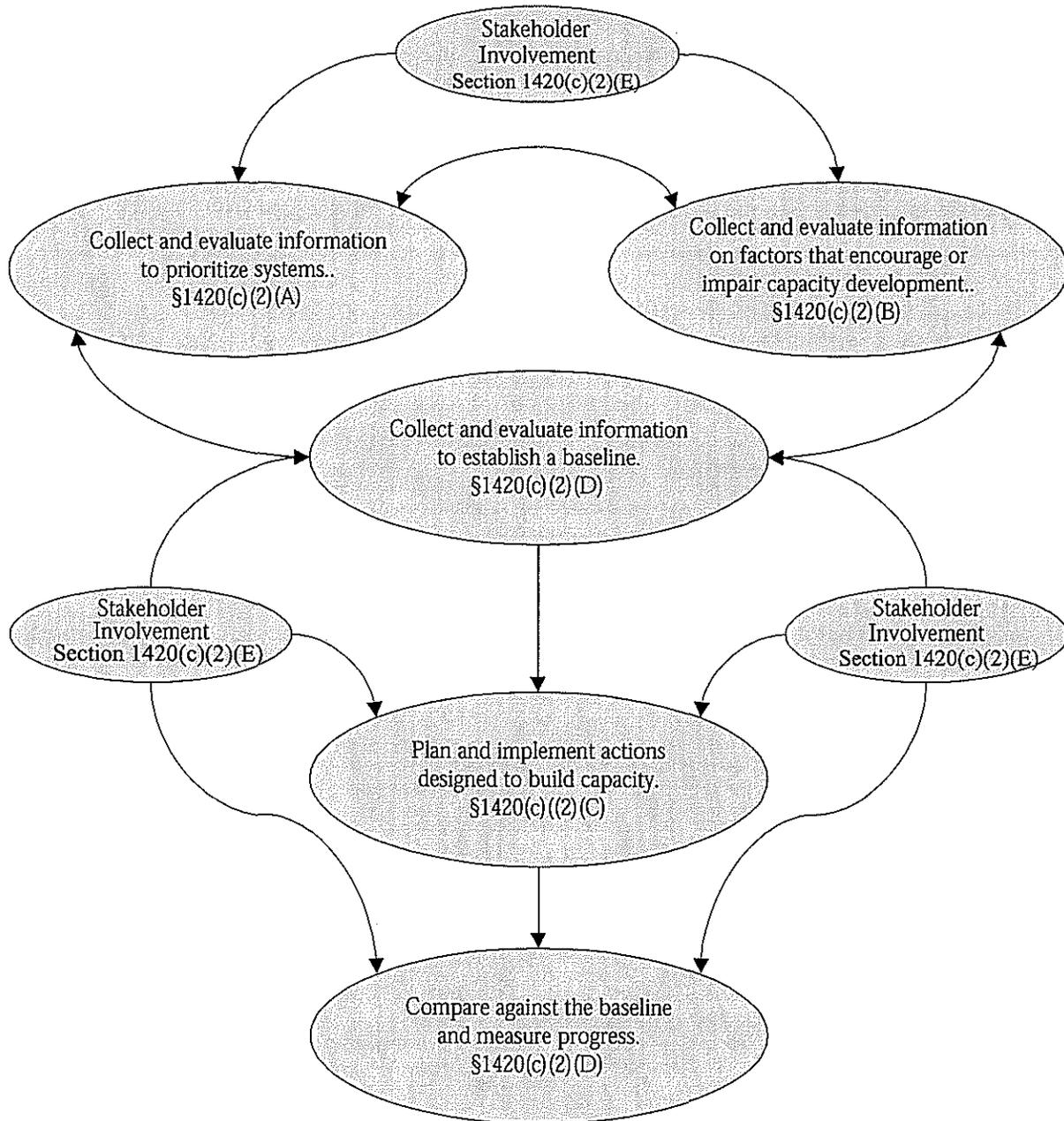
Tools to address these five potential programmatic elements into a strategy are described in the appendix. Exhibit 1 illustrates a way in which these elements may be integrated to form a comprehensive capacity development strategy. This strategy consists of four steps:

1. Collection and evaluation of information to prioritize systems for capacity development efforts and to identify factors that encourage or impair system capacity.
2. Planning for implementation.

3. Implementation actions.
4. Collection and evaluation of information to assess the success of the strategy.

Throughout each of these steps, States are encouraged to identify and involve stakeholders.

Figure 1: Building a Capacity Development Strategy



Relationship Between the Elements of a Capacity Development Strategy and the Tools Used to Enable Their Implementation

Although the SDWA requires that a State consider each of the five potential programmatic elements for inclusion in its capacity development strategy, it does not require the State to use specific tools to implement the selected elements. Each State is unique and must make policy decisions based upon its own characteristics and in light of its particular circumstances. Some States have access to many of the tools described in the appendix, while others have access to only a few. Further, a specific tool may need to be applied differently across States to contribute to capacity development efforts.

Water systems are also unique. A tool that is useful for developing capacity for privately owned, ancillary systems may not be useful for developing capacity in municipal systems.

Exhibit 2 provides a framework for the review of the applicability of each tool in the preparation of a successful capacity development strategy. The cells in the matrix have been left blank, to permit each State to shape their own strategy given their unique situation. The tools, and examples of their use, are described in detail in the appendix.

Exhibit 2: Tools and Resources for Developing State Capacity Programs

Tools	Element A Methods or criteria to prioritize systems	Element B Factors that encourage or impair capacity development	Element C Methods by which the State will use the authority and resources of the SDWA to:			Element D Methods to establish a baseline and measure improvements	Element E Procedures to identify and involve stakeholders
			Assist PWSs to comply with NPDWRs	Encourage the development of partnerships between PWSs	Assist PWSs in the training and certification of their operators		
Compliance data							
Sanitary surveys							
Water system plan or business plan							
Self assessments and peer reviews							
The "Dozen Questions" approach							
Regional plans							
Operator certification programs							
Permitting requirements							
Capital improvement plans							
Comprehensive performance evaluations							
Statewide water quality/quantity studies							
DWSRF loan applications							
DWSRF loans							
Simplified budgeting worksheets							
Annual financial reports							
Cooperation with industry groups							
Public education efforts							
Rate reviews and approvals							
Cooperation with NGOs							
Big brother and "buddy system" programs							
Restructuring programs							
Training and technical assistance programs							
Coordination with other agencies							
Source water assessment programs							
Water conservation plans							
Emergency response plans							
Certificates of Convenience and Necessity							
Review of audit reports							
Review of bond issues							
Satellite management programs							
Consumer Confidence Reports							
Enforcement records							
State/Federal survey of infrastructure needs							

Element A: Methods or Criteria to Prioritize Systems

A variety of methods and criteria can be used to identify and prioritize systems that need to improve their technical, managerial, and financial capacity. In many cases, a combination of tools is most effective in collecting the information needed to prioritize systems. States may consider the following in developing their methods and criteria:

- **Does the State's methods or criteria for prioritizing systems permit the consideration of all systems in the State?** Review of compliance data would meet this suggestion. Tools such as sanitary surveys or simplified budgeting worksheets would meet this suggestion if they were required of all systems over a specified period of time period.
- **Do the methods or criteria for prioritizing systems provide the State with a ranking scheme?** The use of some of the tools discussed below leads naturally to ranking schemes. For example, States could prioritize systems currently in significant noncompliance. In other cases, States must adopt ranking schemes that fit the available tools.
- **Are the methods or criteria for prioritizing systems easy to implement?**
- **What are the data requirements of the prioritization procedure? Does the State have an existing database, can an existing database be modified, or can a new data system be developed, given available resources?** It would be helpful to organize any new prioritization database to ensure easy maintenance, user-friendly data retrieval, and the availability of the correct data. A State should also coordinate its capacity development database with the databases for programs with similar data needs, such as a State's disadvantaged-community program.

Washington and Massachusetts have developed systems to identify and prioritize those systems most in need of capacity development:

Washington tracks the performance of all systems in terms of their compliance histories, their water system plans, and the financial viability component of their water system plans. Systems are classified according to their compliance and capacity. Systems classified as "green" have adequate capacity and compliance histories; systems coded as "red" have inadequate capacity and/or compliance histories.

Massachusetts' program for "viability assessment and assurance" covers all CWSs and NTNCWSs serving fewer than 1,000 persons. The program requires each of these systems to undergo a Comprehensive Compliance Evaluation (CCE) Sanitary Survey and a follow-up survey at least once every 6 years. Depending on the results of the CCE, systems may be referred to a "Mobilization Partner" for viability assessment and technical assistance.

Exhibit 3 lists some tools that States might use in developing their methods or criteria for prioritizing systems. This table is meant to serve only as a starting point—depending upon their unique circumstances, States may be able to take advantage of additional tools to help prioritize systems. A full description of each tool and examples of its use are provided in the appendix.

Exhibit 3
Tools to Develop Methods or Criteria to Prioritize Systems

Tool
Annual Financial Reports
Capital Improvement Plans
Compliance Data
Comprehensive Performance Evaluations
Consumer Confidence Reports
DWSRF Loan Applications
Operator Certification Programs
Permitting Requirements
Sanitary Surveys
Self-Assessments
Source Water Assessment Programs
State or Federal Surveys of Infrastructure Needs
Statewide Water Quality/Quantity Studies
Water System Plans or Business Plans

Element B: Factors That Encourage or Impair Capacity Development

Under §1420(c)(2)(B) of the SDWA, States must consider developing a description of the "institutional, regulatory, financial, tax, or legal factors at the Federal, State, or local level that encourage or impair capacity development." The broad spectrum of factors that might be included in this description may make it quite comprehensive for each State. Factors that impair capacity development efforts within a State might include:

- A State's lack of legal (or regulatory) authority to develop and implement a capacity development strategy.
- Institutional barriers to developing a capacity development strategy.
- Legal and financial issues associated with water rights.
- Insufficient State or local funding to implement a capacity development strategy.
- A lack of reciprocity for operator certification.
- Barriers that preclude systems from obtaining variances or exemptions reasonably.
- State statutes or regulations that hinder consolidation, regionalization, or interconnection.

The 1996 Amendments streamline the process of applying for variances and exemptions, and provide access to DWSRF resources to help States overcome some of the barriers outlined above.

Factors that encourage capacity development within a State might include:

- Statewide growth-management legislation—encourages capacity development by checking the unrestricted growth of poorly-planned water systems (other statewide planning statutes have similar beneficial effects).
- Statutes dealing with privatization or procurement—allows systems to contract for operations and maintenance or other services more easily.
- Statutes dealing with mergers and acquisitions—encourages consolidation by allowing adjustments to the rate base.
- Statutes that require renewable operating permits for water systems, CCNs, or periodic sanitary surveys—encourages capacity development by enabling the State to periodically assess capacity.

Chapter III

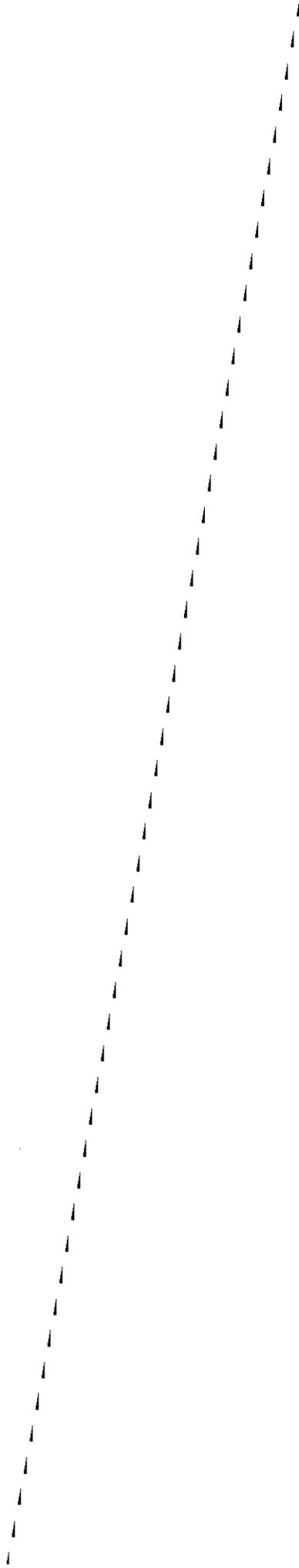
States' reports to their legislatures on the subject of capacity development may prove useful in the creation and implementation of capacity development strategies. Many of these reports include discussions of the factors that encourage or impair capacity development. Examples of useful reports are those submitted in Washington, Connecticut, California, and Pennsylvania. While each State's report has unique aspects, the process that was followed — including the issues that were discussed — should be helpful to other States that are considering these issues.

Reports derived from the deliberations of stakeholder workgroups, such as those published in North Carolina and South Carolina, may also prove helpful in the preparation of capacity development strategies for other States.

Exhibit 4 lists several tools that address the factors that impair capacity development. This table is meant only as a starting point. As States build their capacity development strategies, they are likely to find other tools to address factors that impair capacity efforts. A full description of each tool and examples of its use are provided in the appendix.

Exhibit 4
Tools to Address Factors that Impair Capacity Development Efforts

Tool
Capital Improvement Plans
Comprehensive Performance Evaluations
Consumer Confidence Reports
Cooperation with NGOs
Coordination with Other Agencies
DWSRF Loan Applications
Operator Certification Programs
Permitting Requirements
Rate Reviews and Approvals
Regional Plans
Restructuring Programs
Sanitary Surveys
Satellite Management Programs
Source Water Assessment Programs
Training and Technical Assistance Programs
Water Conservation Plans
Water System Plans or Business Plans



Element C: Description of How the State Will Use the Authority and Resources of the SDWA

Under SDWA §1420(c)(2)(C), States must describe how they will use the authority and resources of the SDWA to improve capacity in PWSs. Specifically, the State is asked to describe how it will accomplish three goals central to a sound capacity development strategy:

1. Assist PWSs in complying with NPDWRs.
2. Encourage the development of partnerships between PWSs to enhance the technical, managerial, and financial capacity of the systems.
3. Assist PWSs in the training and certification of their operators.

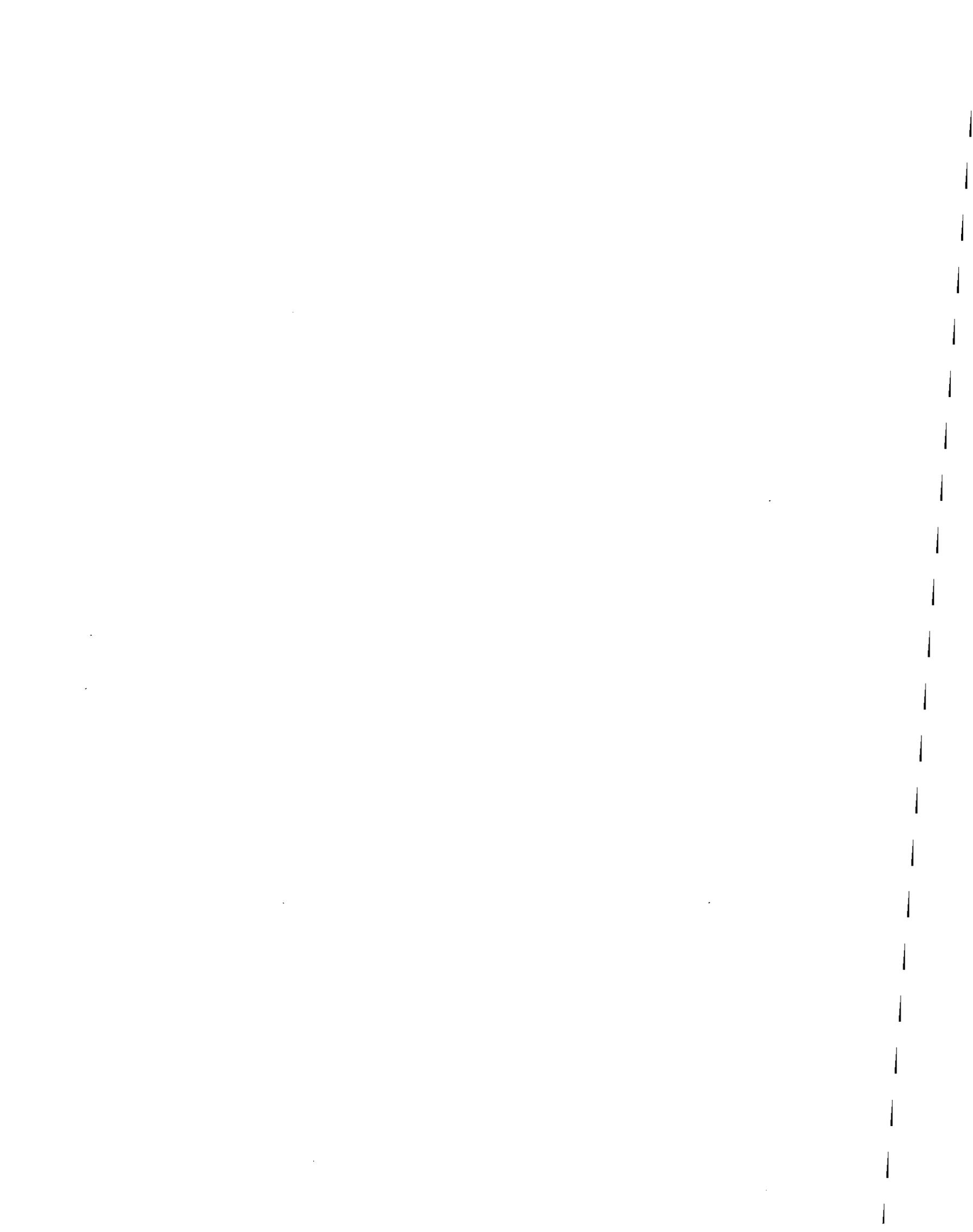
This is the core element of a State's capacity development strategy. Under this element the State describes how it will use the new financial and programmatic resources of the 1996 SDWA Amendments, and any other statutory or programmatic means, to help water systems reliably deliver safe drinking water. This element encompasses a wide variety of activities meant to provide assistance to individual water systems and to build partnerships among systems.

The activities set forth in element C are at the heart of the linkages between the capacity development program and other sections of the SDWA. Not only are the authority and resources provided in other parts of the SDWA—and the “other means” that may be available in other State and federal programs—vital to developing capacity, the development of greater system capacity through compliance, including technical assistance and multi-system partnerships, is essential for other important sections of the SDWA to function.

For example, variances and exemptions are key parts of the new flexibility provided to small water systems. Before States can grant variances or exemptions, the SDWA requires them to evaluate whether restructuring and water supply alternatives are affordable compliance options. Because both alternatives include, by definition, multi-system partnerships, the State's database and methodology for analyzing that data will need to look well beyond the options that lie within the reach of the individual system seeking a variance or exemption.

Because this information has not been required for the drinking water program in the past, many States may not have the database or analytic capabilities to perform these needed functions. But by formulating a capacity development strategy and using the resources available through the DWSRF, States can assemble this database and develop analytic methodologies that will help them make these decisions.

In formulating capacity development strategies, State drinking water programs should locate and evaluate data sources and prepare to apply them to assess compliance options for small



Chapter III

systems that apply for variances or exemptions. The source water assessments required of States under §1453 of the SDWA (funded through the DWSRF) can be an important means of assembling information on the water sources currently used by PWSs, if designed with this use in mind.

Exhibit 5 lists several tools that may permit States to exercise the authority and resources of the SDWA. This table is meant only as a starting point as States build their capacity development strategies. A State is likely to find other tools. A full description of each tool and examples of its use are provided in the appendix.

Exhibit 5

Tools that May Permit the State to Exercise the Authority and Resources of the SDWA

Tool
Big Brother and "Buddy System" Programs
Capital Improvement Plans
Certificates of Convenience and Necessity
Compliance Data
Comprehensive Performance Evaluations
Cooperation with NGOs
Cooperation with Industry Groups
Coordination with Other Agencies
DWSRF Loan Applications
Emergency Response Plans
Enforcement Records
Operator Certification Programs
Permitting Requirements
Public Education Programs
Rate Reviews and Approvals
Regional Plans
Restructuring Programs
Bond Issue Review
Reviews of Audit Reports
Sanitary Surveys
Satellite Management Programs
Self-Assessments
Statewide Water Quality/Quantity Studies
Training and Technical Assistance Programs
Water System Plans or Business Plans
Water Conservation Plans

Element D: Establishing a Baseline and Measuring Improvements

Establishing a baseline and measuring improvements are crucial to fulfilling State responsibilities under §1420(b)(2), which requires State reports to the EPA Administrator, and §1420(c)(3), which requires State reports to the Governors. States must evaluate the success of their capacity development efforts as part of both reports. The most meaningful way to measure the success of State efforts is to measure actual improvements in water system capacity, but capacity building is an incremental process that may take years to result in measurable improvements. Therefore, even highly effective capacity development programs may not show immediate improvements in the actual capacity of water systems.

There are several approaches to measuring capacity:

- **Outreach activity.** A State could assess its program on the basis of its effectiveness in reaching water systems. This could include sanitary surveys conducted, Comprehensive Performance Evaluations conducted, technical assistance provided, and completion of water system plans or self-assessments. To make this a valid measure, States need to ensure that these activities are helping systems achieve and maintain capacity.
- **Operator certification.** States could base their assessment on the prevalence of certified operators who have the training necessary to improve the capacity of the systems they operate.
- **Planning mechanisms.** States could use the results of water system self-assessments, water system plans, annual financial reports, or simplified budgeting worksheets to measure improvements in capacity. This process would require a baseline measure of all systems at the time when the capacity development efforts began and a method to update system assessments regularly.
- **Compliance data.** Since the statute explicitly mentions capacity with respect to national primary drinking water regulations, analyzing compliance trends could be a useful way to measure improvements in capacity. The baseline would be compliance data from the calendar quarter when the capacity development efforts began. Variables such as the number of systems in significant noncompliance, number of exceedances, number of M/R violations, and time required to achieve compliance could be used as indicators of capacity. Measuring improvements solely on the basis of compliance might yield an analytical framework that is too limited, since factors such as new regulations or new enforcement tools could influence compliance rates. In addition, trends in compliance data may not yield sufficient data over the short term because capacity development is an incremental, long-term process.

Element E: Identifying Interested Persons

The purpose of this element is to identify stakeholders, people that have an interest in and are involved in the development and implementation of the capacity development strategy. The overall purpose of identifying and involving stakeholders is to inform the parties that interact with water systems so they will be better able to contribute to capacity assurance in their actions.

One approach to identifying stakeholders is to use resources available to related outreach programs. Potentially interested parties include:

- **Advisory panels for new system development.** Foremost among the methods for involving and informing key stakeholders is the creation of a formal stakeholder advisory panel as part of a new system capacity assurance program. Such panels should include governmental and nongovernmental organizations. States could use panels to disseminate information on existing system capacity. The key groups involved in new system formation do not represent everyone, but their communication networks do reach a large proportion of the target audience. Potential advisory panel constituents include:
 - Builders' associations
 - Realtors' associations
 - Mobile home park operators' associations
 - County associations
 - Municipal associations
 - Planners' associations
 - Consulting engineers' associations
 - Associations of utilities (AWWA, NAWC, NRWA)
 - Consumer advocates
 - Environmental groups
 - Operators' associations
 - Technical assistance providers (NRWA, RCAP)
 - Community action agencies
 - Community development corporations
 - Homeowners' associations
 - Chambers of commerce
 - Regulated community
 - Citizens who have registered an interest
 - Bankers and lenders

- **Operator certification advisory boards.** Operator certification advisory boards can be key resources in disseminating capacity information. States might work with operator certification boards to develop a certification curriculum that would help ensure capacity.

Cooperation with Non-Governmental Organizations

Non-governmental organizations have an important role to play in the implementation of capacity development strategies. These organizations offer a non-governmental and non-regulatory resource for technical assistance and training services for PWSs. Non-governmental organizations that are active in the field of public water supply are organizations like the American Water Works Association, the National Rural Water Association, the Association of Metropolitan Water Agencies, the National Association of Water Companies, the Association of Boards of Certification, the Rural Community Assistance Program, and others.

Developing relationships with non-governmental organizations helps ensure their participation in the capacity development process and creates a forum for discussion. In addition, because they are non-governmental and non-regulatory, their participation brings a fresh perspective to the challenges facing small water systems.

Uses of this tool include:

- *Assisting PWSs in complying with NPDWRs; encouraging the development of partnerships between PWSs to enhance technical, managerial, and financial capacity; and assisting PWSs in training, certification, and continuing education of operators.* Cooperation with non-governmental organizations could assist the State in achieving all of these objectives.
- *Identifying interested persons.* Many non-governmental organizations represent important stakeholder groups.

Sources of Additional Information

American Water Works Association: www.awwa.org

Association of Metropolitan Water Agencies: www.amwa-water.org/water

National Rural Water Association: www.nrwa.org

Rural Community Assistance Program: www.rcap.org

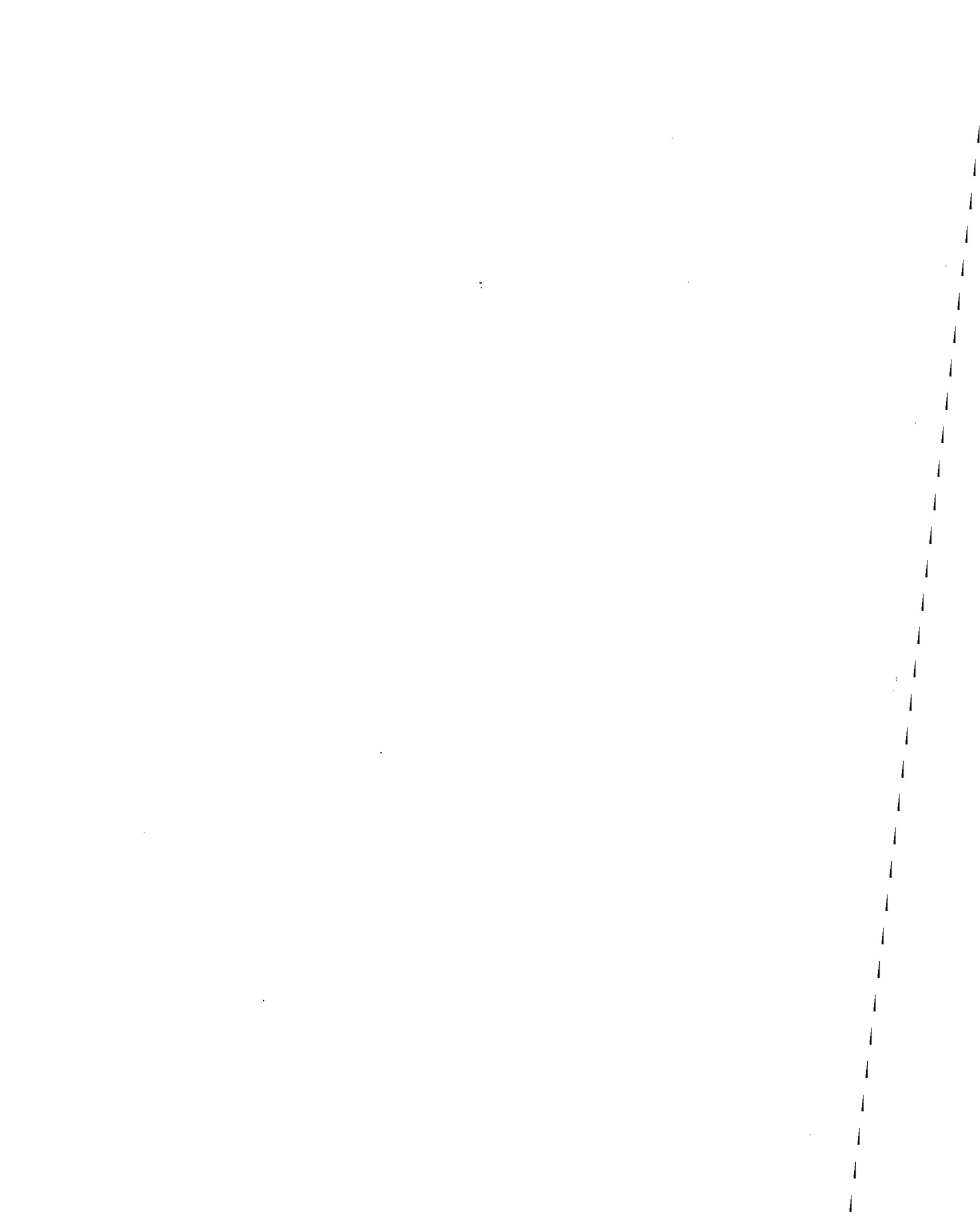
Partnership for Safe Water: www.awwa.org/partner2.htm

Association of State Drinking Water Administrators (ASDWA): www.asdwa.org

American Water Works Association Research Foundation (AWWARF): www.awwarf.com

The broad applicability of this tool is outlined below:

Cooperation with Non-Governmental Organizations					
Potential Uses			Area of Capacity		
			Technical	Managerial	Financial
Ensuring New System Capacity					
Capacity Development Strategy	Element A: Prioritizing Systems				
	Element B: Factors That Encourage or Impair Capacity Development				
	Element C: Using the Authority and Resources of the SDWA	Assisting PWSs in Complying with NPDWRs	✓	✓	✓
		Encouraging the Development of Partnerships Between PWSs	✓	✓	✓
		Assist PWSs in the Training and Certification of Their Operators	✓	✓	✓
	Element D: Establishing a Baseline and Measuring Improvements				
	Element E: Identifying Interested Persons		✓	✓	✓
Assessing Capacity					



Rate Reviews and Approvals

Public utility commissions (PUCs) periodically review the rate structures of the PWSs they regulate. The theoretical ideal is to set rates equal to the cost of service plus a reasonable return on investment. Since the cost of service changes periodically, it is useful to review costs and rates and determine whether systems are, in fact, recovering their full cost of service. Approval of the rate application is largely contingent on having adequate records to determine cost-of-service and the valuation of rate base.

The review of a rate application requires the collection of substantial information that may be relevant to issues of capacity development. For example, PUCs routinely examine the results of sanitary surveys. There also may be an on-site inspection of the facilities to determine whether deficiencies noted on the sanitary survey have been addressed.

The rate review process identifies systems that are not metered or that use flat rates; utilities may be ordered to meter customers or to set rates based on usage. This process encourages conservation and helps to identify systems with significant leaks.

Customers are notified of the rate change application and have an opportunity to protest the rates or the service provided by the utility. Customer complaints during the rate approval process could be another source of information indicating system deficiencies that should be addressed.

Uses of this tool include:

- ***Prioritizing systems.*** Data from rate reviews can be used to help prioritize systems. If data from rate reviews are not of uniform quality, or if the number and percentage of systems with reviews is small, rate review data could be used to supplement other data sources.
- ***Establishing a baseline and measuring improvements in capacity.*** The data from rate reviews can be used to measure progress. A longitudinal analysis of the technical, financial, and managerial capacity of systems, as measured by information obtained during rate reviews, could be used to supplement information on these subjects gathered from other sources.
- ***Assessing capacity.*** Rate application data are taken from sanitary surveys and occasionally on-site inspections of the facilities. These types of information provide substantial insights into the technical capacity of the system. The records of all systems submitting a rate application will be subject to inspection by PUC staff, allowing thorough assessment of managerial capacity. The PUC review of cost-of-service, valuation of rate base, depreciation expense and the debt/equity ratio to ensure appropriate rates could also assist in assessing financial capacity.

Sources of Additional Information

For more information on rate reviews see:

Public Utilities Commission, State of California, Proceeding No. I.90-11-033, "Staff Report on Issues Related to Small Water Utilities," June 10, 1991.

AWWA Research Foundation, "Meeting Future Financial Needs of Water Utilities."

The broad applicability of this tool is outlined below:

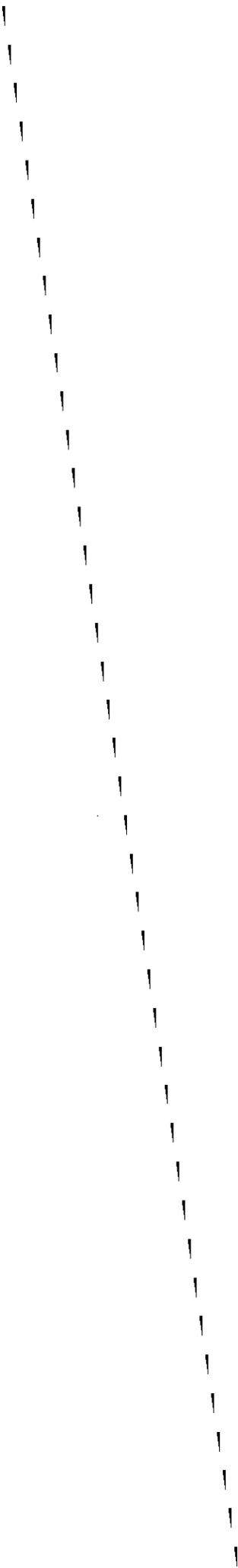
Rate Reviews and Approvals					
Potential Uses		Area of Capacity			
		Technical	Managerial	Financial	
Ensuring New System Capacity					
Capacity Development Strategy	Element A: Prioritizing Systems	✓	✓	✓	
	Element B: Factors That Encourage or Impair Capacity Development				
	Element C: Using the Authority and Resources of the SDWA	Assisting PWSs in Complying with NPDWRs			
		Encouraging the Development of Partnerships Between PWSs			
		Assist PWSs in the Training and Certification of Their Operators			
	Element D: Establishing a Baseline and Measuring Improvements	✓	✓	✓	
	Element E: Identifying Interested Persons				
Assessing Capacity		✓	✓	✓	

Self-Assessment and the “Dozen Questions”

Several States have used self-assessment to help small water system owners assess their system’s capacity. States typically provide a self-assessment manual that contains a structured system of yes/no questions that follow the major elements of a complete business or water system plan. Thus, the questions are organized around issues related to technical, managerial, and financial capacity. Questions are further grouped according to overall topic areas. Each topic represents an important area where there may be hidden costs in store for the water system. The manual may contain simple budget worksheets that assist the water system in using its estimates of future costs to develop an assessment of projected revenue, capital requirements, and water rates.

Uses of this tool include:

- *The “Dozen Questions”* is a self-assessment tool that groups important questions regarding system capacity into twelve categories. States have used these questions as part of a business plan approach or as a self-assessment exercise to assist PWSs in complying with NPDWRs, encourage the development of partnerships between PWSs, and assist PWSs in the training of operators.
- *Measuring improvements in capacity.* This process would require a baseline measure of all systems at the time when the capacity development efforts began, and a method to update system assessments regularly.



Sources of Additional Information

Cromwell, Schmidt and Albani, "A Dozen Questions to Assess Small System Viability," Proceedings of the 1993 AWWA Annual Conference, San Antonio, Texas.

Pennsylvania Department of Environmental Protection, "Pennsylvania Water System Self-Assessment Guide," September 1996.

Iowa Department of Natural Resources, "Self Assessment Manuals for Iowa Water System Viability," September 1996.

RCAP-Community Resource Group, "The Small System Guide to Viability."

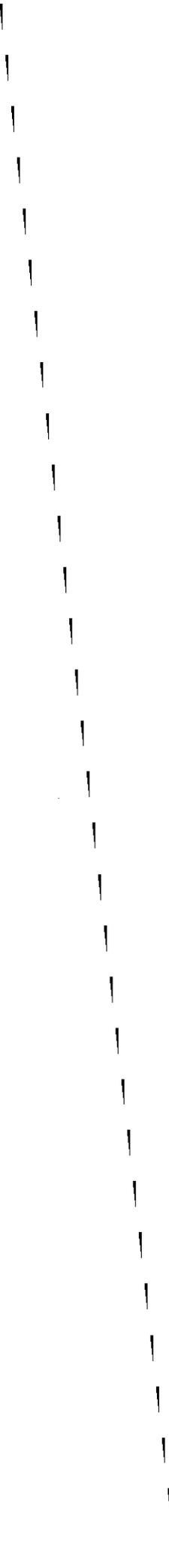
RCAP-Community Resource Group, "The Self-Evaluation Guide for Decision-Makers of Small Community Water Systems."

Rural Water Association and American Water Works Association, Georgia Section, "Georgia's Small System Peer Review Program."

You can obtain more information by calling the RCAP-Community Resource Group at 501-443-2700, the Georgia Rural Water Association at 770-358-0221, the National Rural Water Association at 405-252-0629, or the American Water Works Association at 303-799-7711.

The broad applicability of this tool is outlined below:

Self Assessment and the Dozen Questions					
Potential Uses			Area of Capacity		
			Technical	Managerial	Financial
Ensuring New System Capacity					
Capacity Development Strategy	Element A: Prioritizing Systems		✓	✓	✓
	Element B: Factors That Encourage or Impair Capacity Development				
	Element C: Using the Authority and Resources of the SDWA	Assisting PWSs in Complying with NPDWRs	✓	✓	✓
		Encouraging the Development of Partnerships Between PWSs	✓	✓	✓
		Assist PWSs in the Training and Certification of Their Operators	✓	✓	✓
	Element D: Establishing a Baseline and Measuring Improvements		✓	✓	✓
	Element E: Identifying Interested Persons				
Assessing Capacity			✓	✓	✓



Training and Technical Assistance

The SDWA provides new resources to assist systems with capacity development. One important use of these funds is training and technical assistance. These tools are likely to play a vital role in capacity development strategies. A common theme in systems that lack adequate capacity is the absence of trained, professional personnel to operate and manage the system. Training and technical assistance can remedy that deficiency. These tools also can be used to educate and persuade system owners and operators to adopt practices and methods that will enhance capacity and reliability. Both State and non-governmental organizations offer training and technical assistance programs. Services range from on-site assistance to educational programs for operator certification and community planning.

Uses of this tool include:

- ***Prioritizing systems.*** Training and technical assistance providers could be one source of information for prioritization. However, systems that need training or technical assistance, but have not sought them out, are probably most in need of improving capacity.
- ***Assisting PWSs in complying with NPDWRs; encouraging the development of partnerships between PWSs; and assisting PWSs in training, certification, and continuing education of operators.*** Training and technical assistance providers can be important assets in the development of this aspect of a strategy, particularly with respect to training, certification, and continuing education.

Sources of Additional Information

There are a wide variety of providers of training and technical assistance. These include:

Rural Community Action Project (RCAP) and their regional affiliates

National Rural Water Association (NRWA) and their State associations

American Water Works Association (AWWA) and their State sections

State public utility commissions

International City Managers Association (ICMA)

National Environmental Training Association (NETA)

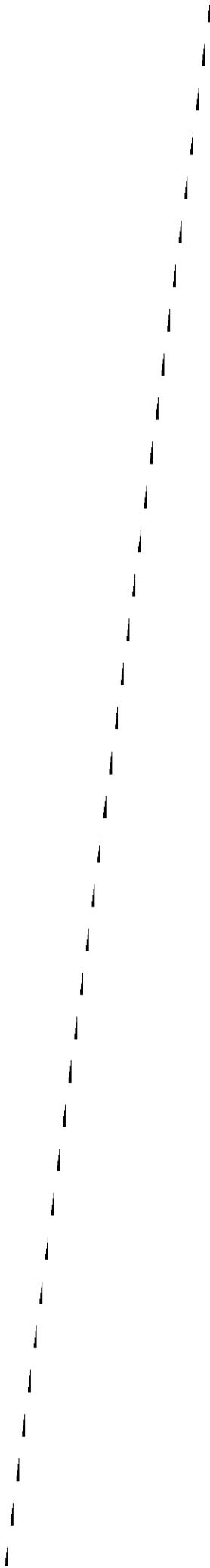
For more information on training and technical assistance providers see:

National Training Coalition, "Final Report on Training Needs and Providers," July 1997.

You can obtain more information by calling the Association of State Drinking Water Administrators at 202-293-7655, RCAP-Community Resource Group at 501-443-2700, the National Rural Water Association at 405-252-0629, or the American Water Works Association at 303-799-7711.

The broad applicability of this tool is outlined below:

Training and Technical Assistance					
Potential Uses			Area of Capacity		
			Technical	Managerial	Financial
Ensuring New System Capacity					
Capacity Development Strategy	Element A: Prioritizing Systems		✓	✓	
	Element B: Factors That Encourage or Impair Capacity Development				
	Element C: Using the Authority and Resources of the SDWA	Assisting PWSs in Complying with NPDWRs	✓	✓	
		Encouraging the Development of Partnerships Between PWSs	✓	✓	
		Assist PWSs in the Training and Certification of Their Operators	✓	✓	
	Element D: Establishing a Baseline and Measuring Improvements				
	Element E: Identifying Interested Persons				
Assessing Capacity			✓	✓	



Water System Plans or Business Plans

Water system plans (called business plans in some States) are comprehensive documents that attempt to capture the true cost of building and operating a water system by projecting costs and revenues over time. They can be used for both new and existing water systems, and cover not only the physical condition of the system's source, infrastructure, and operations, but also managerial and financial issues. In addition, water system plans force system owners and operators to ponder and plan for the future of their system. Water system plans include a Facilities Plan Checklist that contains a description of required infrastructure and resources, a Management Plan Checklist that describes the system's proposed (or existing) management strategy, and a Financial Plan Checklist that requires systems to provide a complete financial plan.

Uses of this tool include:

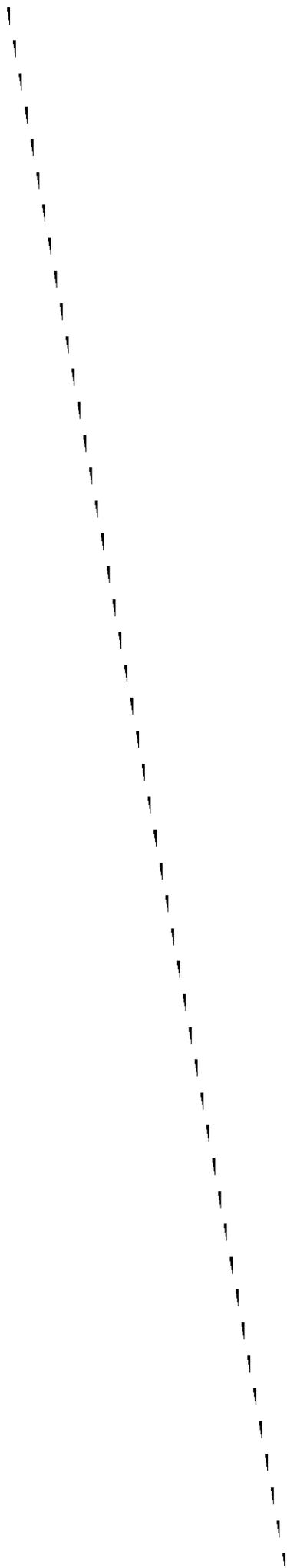
- ***Prioritizing Systems.*** The Pennsylvania Department of Environmental Protection (DEP) has developed a series of benchmarks and indicators for use with business plan data (the PAWATER cost model) that provide an overview of where a proposed system fits in relation to other existing systems. This process provides statistically significant capacity information that could be an effective means of prioritization.

Washington State has a water system planning program that is based on the capacity and size of the system. It includes a comprehensive analysis of the system's capacity, and seeks to ensure and document system capacity for the future.

- ***Assisting PWSs in complying with national primary drinking water regulations and encouraging the development of partnerships between PWSs.*** Water system plans, by requiring a planning process for all systems, assist systems in complying with all federal and State regulations. Since the planning process typically involves consideration of regional solutions to system problems, it also encourages the development of partnerships among systems.
- ***Measuring improvements in capacity.*** This process would require a baseline measure of all systems at the time when the capacity development efforts began, and a method to regularly update system assessments.
- ***Assessing capacity.*** Water system plans typically examine such factors as the characteristics of a system's service area; the adequacy and quality of its source; the condition of its facilities; and its O&M, management, and accounting practices.

In Washington State, a Financial Viability Test (FVT) is required of all CWSs serving fewer than 1,000 service connections that must submit a water system plan. The FVT consists of four steps:

- 1) Develop an operating budget showing that its revenues will meet all incurred expenses over



a six-year period.

- 2) Create and fund an operating cash reserve account at a level equal to or greater than one-eighth of its operating budget (O&M plus G&A expenses). This reserve account can be funded by a one-time charge, a transfer of funds from an existing reserve, or from funds accumulated in the first year of the six-year budget from step 1.
- 3) Create and fund an emergency reserve account to cover the cost of an emergency or failure of its most vulnerable system component (for small systems, usually a well or pump). This reserve account can be funded by a one-time charge, a transfer of funds from existing reserves, a plan to accumulate the fund in the six-year budget from step 1, or an alternative financing arrangement (e.g., an insurance mechanism).
- 4) Conduct a median household income index analysis. The system must demonstrate that the rates required to meet the budget from step 1 and to fund the reserves in steps 2 and 3 do not exceed 1.5 percent of the annual median household income for its county.

In addition to all of these elements of the water system plan, systems typically submit relevant documents that support the plan, e.g., maps of service areas, maps of facilities, and so forth.

Sources of Additional Information

For more information on water system plans, see:

Washington State Department of Health, "Planning Handbook: A Guide for Preparing Water System Plans," August 23, 1993.

Washington State Department of Health, "Financial Viability Manual for New and Expanding Small Water Systems," March 1995.

Pennsylvania Department of Environmental Protection, "Pennsylvania Water System Self-Assessment Guide," September 1996.

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