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

TABLE OF CONTENTS

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
Institutional	9	19	10
Regulatory	25	19	10
Financial	17	21	8
Tax	4	4	3
Legal	4	3	1
Other	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.

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.

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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.

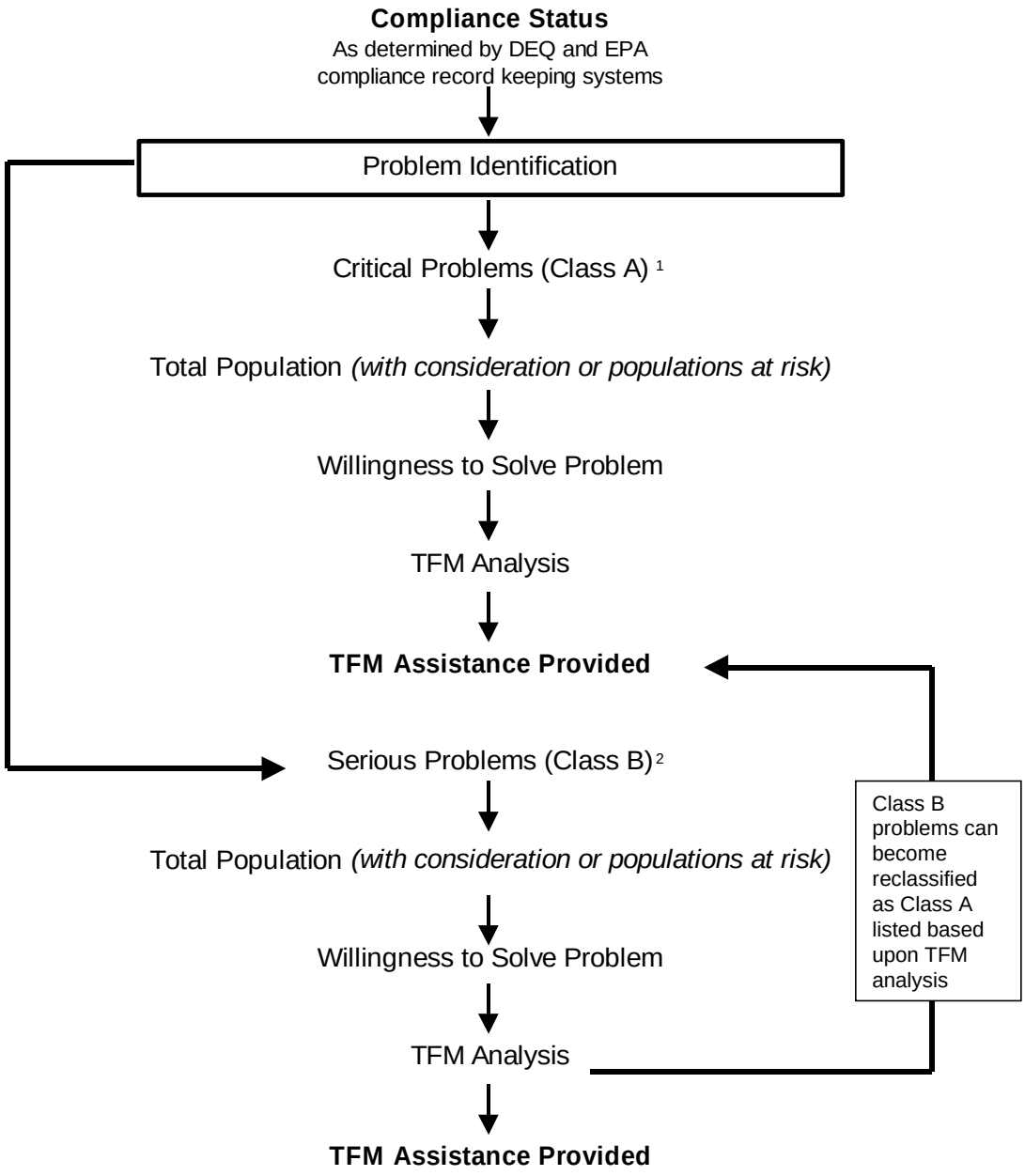
IDENTIFICATION AND PRIORITIZATION

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



[1] Critical problems are characterized as those associated with immediate health risks. For example, discovery of microbial contaminants or nitrate exceeding the MCL. Please refer to the general ranking of drinking water rule violations (next page) for more detail.

[2] Serious problems are those that pose a potential health risk, but may not require immediate action. Please refer to the general ranking in Table 2.

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.
   Poses immediate threat of illness.

2. Coliform positive sample(s) without fecal organisms present.
   Indicates compromise of distribution system or possible treatment failure. Risk of illness or water borne outbreak if not diagnosed and corrected immediately.

3. Treatment technique violation for microbial contaminants – failure to filter surface water, failure to disinfect.
   Exposes customers to water that may contain microbial pathogens. Potential waterborne disease outbreak.

4. Chemical detection above the "unreasonable risk to health level."
   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.

5. Failure to monitor with a history of violation(s).
   Systems that fail to monitor do not know 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.

6. Non-compliance with reporting and record-keeping requirements with a history of violation(s).
   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.

Serious (Class B)

1. Failure to monitor without a history of violation(s).

2. Chemical MCL exceedance.
   Involves chronic exposure to potential carcinogens. Must be corrected by treatment or provision of alternative water source, but does not pose an acute risk.

3. Non-compliance with reporting and record-keeping requirements without 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	Enhance-ments	Impairments	Noted in Findings Report
Institutional	9	19	10
Regulatory	25	19	10
Financial	17	21	8
Tax	4	4	3
Legal	4	3	1
Other	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	Enhance-ments	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.
  - *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.
  - *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.
  - *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.
  - *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 by 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	Enhance-ments	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 Factos That Affect Water System TFM Capacity

Factors	Enhance-ments	Impairments	Noted in Findings Report
Institutional	3	9	4
Regulatory	6	9	3
Financial	4	12	4
Tax	0	1	0
Legal	1	1	0
Other	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**
Institutional	Continue to facilitate education and train operators		Yes
Regulatory	Water quality program		Yes
	The constant changing of regulations – no flexibility, complexity of prescriptive regulations, "one size fits all"	Yes	
Financial	SRF capitalization grants for the states		Yes
	Federal government allows set asides		Yes
	Continuation of a good bond market		Yes
	Loans and grants provided by SDWA Amendments		Yes
	Rural Development Assn. Loans		Yes
	SRF authorization		Yes
	Required to pay wage rates – increases cost (Davis Bacon)	Yes	
	All needy systems will not receive funding	Yes	
	National/international banks insensitive to local needs	Yes	
	SRF appropriation	Yes	
Tax	Acceleration of depreciation in takeovers		Yes
	Eliminated/Contributions in Aid of Construction (CIAC) related tax		Yes
Legal	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 BACKGROUND

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 T*he 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 of 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 *Federal* Level Not Noted in Findings			
Factor	**Description**	**Impairment**	**Enhancement**
Institutional	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	
Regulatory	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	
Financial	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	
Tax	Eliminated/Contributions in Aid of Construction (CIAC) related tax		Yes

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

Factors that Impair or Enhance Capacity at the *State* Level Not Noted in Findings			
Factor	**Description**	**Impairment**	**Enhancement**
Institutional	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	
Regulatory	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	
Financial	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**
Financial	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	
	Assets of water system generally not acceptable collateral	Yes	
	Borrowing only at premium rates	Yes	
Tax	State appraisal of operating property for public utilities		Yes
	Lack of incentives to improve systems	Yes	
	No incentives for takeover of non-viable systems	Yes	
Legal	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 *Local* Level Not Noted in Findings			
Factor	**Description**	**Impairment**	**Enhancement**
Institutional	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	
Regulatory	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	
Financial	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**
Financial	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	
Tax	Franchise fees increase rates	Yes	
Legal	Developers are becoming accustomed to more requirements		Yes
	Lack of business knowledge or experience	Yes	
Other	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 #1was 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 pit-less 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 HAHOA Annual Meeting was held.

The board made a presentation to the HAHOA 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 to Idaho Department of Water Resources 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 ordered 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.