

REPORT OF FINDINGS

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

VIABILITY ASSESSMENT ADVISORY GROUP TO
THE WATER SUPPLY SECTION,
ENVIRONMENTAL PROTECTION DIVISION

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EXECUTIVE SUMMARY

During 1998 and 1999, the Viability Assessment Advisory Group to the Iowa Department of Natural Resources (IDNR) 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 Advisory Group for consideration by the general public and IDNR management. Guidance for the Advisory Group in preparing this report came generally from the Safe Drinking Water Act (SDWA) Amendments of 1996. At the heart of this report are the Advisory Group's recommendations regarding the programs that the IDNR Water Supply Section could strengthen or establish 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: IDENTIFYING WATER SYSTEMS IN NEED OF TECHNICAL, FINANCIAL AND MANAGERIAL ASSISTANCE

A multi-level ranking scheme was proposed, in which compliance with the drinking water regulations was 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, serious, minor, potential, and those that request assistance. Water systems in the five classes will be ranked additionally by their willingness to work with IDNR in achieving solutions.

SECTION B: FACTORS THAT ENHANCE OR IMPAIR WATER SYSTEM CAPACITY DEVELOPMENT

Factors operating at the Federal, State, and local level that enhance or impair water system capacity are presented in this section of the report. These factors were drawn from the experience of Advisory Group members, and from knowledge gained by the IDNR in administering the drinking water program.

The Advisory Group identified 82 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 E1. The largest number of impairments, (24), occurred at the State level. Of the State impairments, the seven (7) financial impairments were the most significant group.

Table E1: Federal, State and Local Factors that Affect Water System Technical, Financial, and Managerial Capacity

Factors	Enhancements	Impairments
Institutional	6	18
Regulatory	8	11
Financial	7	17
Tax	3	5
Legal	1	3
Other	1	2
Total	26	56

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

In developing the conclusions drawn from analysis of the enhancements and impairments noted in Section B, the Advisory Group discovered eight recommendations for how the resources of the State and other stakeholders could be used to help water systems improve TFM capabilities. The eight ideas are noted briefly below and in more detail in this Report of Findings:

1. The Advisory Group recommends the systematic collection of supplemental information that describes the TFM conditions of public water systems and that the information should be shared with operators and management boards.
2. The Group recommends programs and methods for improving the knowledge of drinking water protection rules among operation and management personnel.
3. Communication among important stakeholders needs improvement. The Advisory Group recommends several communication mechanisms for information sharing between US EPA, IDNR and the regulated water systems.
4. Customer knowledge of water system performance and financing is important to the long-term success of public water facilities. The Advisory Group recommends actions that can improve customer knowledge of and involvement in the performance of their water systems.
5. The Advisory Group has offered six ideas designed to improve the partnerships and networking between governmental agencies and among water systems.
6. Inter-departmental and intra-departmental communications are essential to the efficient use of public resources to improve the TFM capabilities of public water systems. The Advisory Group offers six themes for consideration by the IDNR.
7. The Advisory Group recommends that the IDNR sponsor a meeting or a series of meetings to foster the discussion of innovative techniques for financing capital improvements of small public water systems.
8. Finally, the overall success of the State's Capacity Development Strategy will depend in part on the Water Supply Section's acquisition of appropriate financial and personnel resources to design, promote and deliver TFM assistance programs. The Advisory Group offers suggestions on how it could assist in this process.

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

In fashioning its capacity development strategy, the Advisory Group noted in Section D how the IDNR might assess the performance of capacity building efforts. Four general measures of success were developed. First, the IDNR could note changes in compliance performance, both statewide and on a system-specific basis. Second, the IDNR 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 IDNR could learn more about the effectiveness of its programs. Finally, the IDNR could keep track of the number of water systems that prepare capital facility management plans, water system plans, emergency plans, and other activities that contribute directly to enhanced capacity.

SECTION E: PUBLIC INVOLVEMENT IN PREPARING THE IOWA CAPACITY DEVELOPMENT REPORT OF FINDINGS

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

GLOSSARY OF TERMS AND ACRONYMS USED IN THIS REPORT

AWWA: American Water Works Association – An organization of water professionals dedicated to providing leadership to the drinking water profession in the areas of drinking water quality, water resource policy, and water related planning.

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 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.

CCR: Consumer Confidence Report – An annual water quality report required by the 1996 SDWA amendments, which summarizes information on source water, levels of any detected contaminants, compliance with drinking water rules, and educational material.

CEU: Continuing Education Unit – Formal credit for participation in education and training programs, often necessary for maintaining certification or licensing status.

DWSRF: Drinking Water State Revolving Loan Fund - Congress authorized this fund in 1996. The Iowa Department of Natural Resources administers the DWSRF.

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

FTE: Full Time Equivalent – A unit of work-time for a person equal to 2080 hours per year.

HUD: Housing and Urban Development – A federal agency that provides assistance for housing and community development.

IAMU: Iowa Association of Municipal Utilities – A non-profit trade association that represents the interests of 551 cities, which operate electric, gas, water, or telecommunications utilities. All IAMU member cities operate water utilities.

IAWA: Iowa Association of Water Agencies – A professional organization representing water systems serving greater than 10,000 people.

ICN: Iowa Communications Network – A fiber optic resource for distance education and distance learning.

IDED: Iowa Department of Economic Development – A State agency that helps water systems and companies with economic assistance.

IDNR: Iowa Department of Natural Resources – The agency responsible for administering the drinking water standards in Iowa through a primacy agreement with US EPA.

IRWA: Iowa Rural Water Association – A non-profit membership organization that provides support and technical assistance to water and wastewater utilities throughout the State.

SDWA: Safe Drinking Water Act – Passed by the US Congress in 1974 and amended in 1986 and 1996.

TFM: Technical, Financial, and Managerial capacity – An abbreviation used to save space in the report and avoid frequent repetition of these terms, defined previously as “capacity.”

US EPA: The US Environmental Protection Agency - A federal agency that oversees State primacy programs and provides financial support. One of US EPA’s functions is to determine when a State’s capacity development program is in compliance with the Safe Drinking Water Act.

USDA - RD: US Department of Agriculture – Rural Development – A federal agency that helps rural communities by providing economic and technological assistance.

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 providing safe drinking water. The 1996 Amendments to the Safe Drinking Water Act (SDWA) added capacity development provisions which 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 national 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 attain the capacity they require). The SDWA 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 FY 2002, and only 80 percent of its scheduled allotment in each subsequent federal 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 Iowa Viability Assessment Advisory Group (Advisory Group) chose to prepare a comprehensive *Report of Findings* that includes consideration of all SDWA-required capacity development strategy elements.

ABOUT IOWA'S DRINKING WATER SYSTEMS

The Iowa Department of Natural Resources (IDNR) regulates all public water systems in Iowa. Public water systems serve at least 15 service connections or serve an average of at least 25 people daily at least 60 days per year. The IDNR was formed in 1986 with the merging of the Department of Water, Air and Waste Management, the Iowa Conservation Commission, the Iowa Geological Survey, and the Energy Policy Council. The Environmental Protection Division of IDNR encompasses the Water, Air, and Land Quality Bureaus, which are further divided into sections. The Water Supply Section regulates public drinking water supplies through a primacy agreement with US EPA.

The state is divided into six geographical regions. Each region contains a field office staffed with environmental specialists to perform compliance inspections, investigate complaints, and provide technical assistance in the field. A central office is located in Des Moines, Iowa, and consists of environmental specialists, engineers, and the section supervisor. The central office issues construction, operation, and water use permits, and monitors compliance for all public water systems. Private water systems serve approximately 10% of the State's population and are governed by the county health departments.

There are approximately 1,930 public drinking water systems in the State of Iowa, the majority of which are classified as small systems. The US EPA considers systems serving populations of less than 10,000 to be medium or small systems. Using this definition, 1,260 of Iowa's 1,294 community and nontransient non-community water systems are considered medium or small systems, leaving only 34 Iowa water systems classified as large systems. An additional 636 transient non-community systems are categorized as small systems.

Beyond the US EPA classification, Iowa differentiates its small systems into the categories of very small, small, and medium systems. Statistics for these systems are summarized in Table I 1: Iowa Water System Classifications by Population.

*Table I 1: Iowa Water System Classifications by Population (Community and Nontransient Non-Community Supplies)**

System Classification	Number of Systems	Population Served
Very Small	761	<500
Small	420	501-3,300
Medium	79	3,301-10,000
Large	34	>10,000
Total	1,294	

*There are an additional 636 transient non-community water systems that are classified as small systems, bringing the total number of Iowa public water supplies to 1,930.

IOWA'S VIABILITY ASSESSMENT ADVISORY GROUP

The Iowa Viability Assessment Advisory Group (Advisory Group), an important assembly of drinking water stakeholders, began work toward developing this *Report of Findings* in December of 1998. The Advisory Group was comprised of members from the Iowa SDWA Advisory Group, who frequently assist the IDNR in developing rules and strategies for public drinking water systems; as well as parties whose opinions were not normally sought by the IDNR, but who desired representation in the development of the State's Viability Strategy. An extensive mailing was conducted to solicit interest in serving with the Advisory Group. The purpose was to form a stakeholder Advisory Group that would represent the broadest possible spectrum of interested parties while at the same time respecting the need to keep the Advisory Group small enough to function efficiently. Provisions were made to expand the public involvement process by the following means:

- A mailing list of persons or organizations was developed so that periodic updates could be provided.
- A decision was made to present the initial recommendations of the Advisory Group to the public through a series of public workshops.
- Organizations that publish newsletters were asked to convey information about the Advisory Group's activities.

These measures, taken together, helped to ensure that the public would have multiple opportunities to learn about and provide input to the viability assessment activities. A record of the Advisory Group's work is found in Appendix A.

Advisory Group Members

Becky Alhelm*, Midwest Assistance Program
Merlin Bartz, State Senator
Sue Behrens, Iowa Waste Reduction Center,
University of Northern Iowa

Leonard Boswell, 3rd District Congressman
James Boyt*, Iowa Water Quality Association
Don Brazleton*, Iowa Association of County
Conservation Boards
Ken Choquette, Department of Public Health
Jane Clark*, Sierra Club
Sue Cosner*, Des Moines Water Works
Mark Dickey*, Iowa Rural Water Association
Mark Duben*, Howard R. Green, Iowa
Consulting Engineer's Council
Robert Dunlevy*, US EPA Region VII
K. B. Earnhardt*, Iowa American Water Co.
Laurie Elliott, Associated Builders &
Contractors, Inc.
William Fink, State Senator
Andrea Fogue*, Iowa League of Cities
David Fox*, Fox Engineering Associates,
AWWA Past President
Dawn Goodrich*, Des Moines Water Works,
Large System Representative
Charles Grassley, U.S. Senator
Bob Green*, Dubuque Water Works, AWWA
Water Utility Council
James Hahn, State Representative
Susan Heathcoate, Iowa Environmental Council
Cathy Heldt*, Iowa Water Well Association
Scott Hemingway*, Iowa Rural Water
Association
Bob Jester, Jester Insurance Services
Steve Jones*, Iowa State University, Operator
Education
Linda Kinman*, Iowa Association of Water
Agencies
Bill Knopf, Associated General Contractors of
Iowa
Mary Kramer, Wellmark/Blue Cross-Blue Shield
Tom Latham, 5th District Congressman
Jim Leach, 1st District Congressman
Wayne Lueders, Association of School Boards
Jon Martens*, Atlantic Municipal Utilities
Chad Mason*, H.R. Green
Charles Moench, Lobbyist, AARP
Mike Mohon, Sunset Homes
Bill Monroe, Iowa Newspaper Association
Bob Morby, US EPA Region VII
John Moreland, Senator Tom Harkin's Office

Bob Mulqueen, Iowa State Association of Counties
Karen Nachtman*, Iowa Association of Municipal Utilities
Tom Neumann*, City of Ames, Iowa Groundwater Association
Scott Norvell, Master Builders of Iowa
Jim Nussle, 2nd District Congressman
Dorman Otte, USDA Rural Economic & Community Development
Lane Palmer, Iowa Department of Economic Development
Bob Renaud*, Senator Charles Grassley's Office
Tim Robbins, Kirkwood Community College
Darlene Robertson, Home Builders Association of Iowa
Carter Robinson*, City of Polk City
Rick Robinson, Iowa Farm Bureau Federation
Luke Roth, Greg Ganske, 4th District Congressman's Office
Dave Rotschafer*, Mount Vernon Public Works, Water Environment Federation Iowa Water Pollution Control Association
Brian Schultz, CFM Environmental, Inc.
David Scott, Executive Director, AWWA Iowa Section
Elliott Smith, Iowa Association of Business & Industry
Kevin Stocker*, Iowa Association of Municipal Utilities
Tom Thorpe*, Thorpe Water Development
Brooke Timmons*, Des Moines Water Works, Large System Representative
Jessica Vanden Berg*, District Representative for Congressman Leonard Boswell
Randy Van Dyke, Clay Regional Water System
Charles Wasker, Home Builders Association of Iowa
Dale Watson*, Fox Engineering Associates
Peter Weyer, Center for Health Effects of Environmental Contamination
William Witt, State Representative

* Attended at least one meeting and/or provided input.

*Iowa Department of Natural Resources
Participating Staff*

Dennis Alt, IDNR, Supervisor
Mike Anderson, IDNR, Engineer
Mike Klinefeldt, IDNR, Specialist
Janet Ott, IDNR, Parks and Recreation
Brent Parker, IDNR, Private Well Program, Engineer
Jennifer Simons, IDNR, Engineer
Jim Stricker, IDNR, Field Office

Iowa Viability Strategy Facilitators

Bill Jarocki, Environmental Finance Center
Symantha Zeimet, Environmental Finance Center

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 IDNR 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 Advisory Group 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 IDNR. Some financial and management capacity information is maintained by the IDNR. The Iowa Public Utilities Commission maintains financial and management information for two regulated systems.
- 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 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.
- Overwhelming majorities of violations of the drinking water rules occur in very small drinking water systems (serving less than 500 persons). 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.
- 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.

Identification and Prioritization

The Advisory Group deliberated the issue of how current information could be used to identify and prioritize systems needing TFM capacity building. Discussions occupied portions of two meetings. As a result of the considerations identified above the ranking scheme illustrated in the flowchart on the following page (Table A1) 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 Water Supply Section staff (Table A2, Items 2-6). This hierarchy will be used to assign compliance problems to **critical, serious, minor, potential,** or **request assistance** categories. Systems will be ranked according to the relative seriousness of the system's problems. 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 A1: IDNR Identification and Prioritization Ranking Schematic

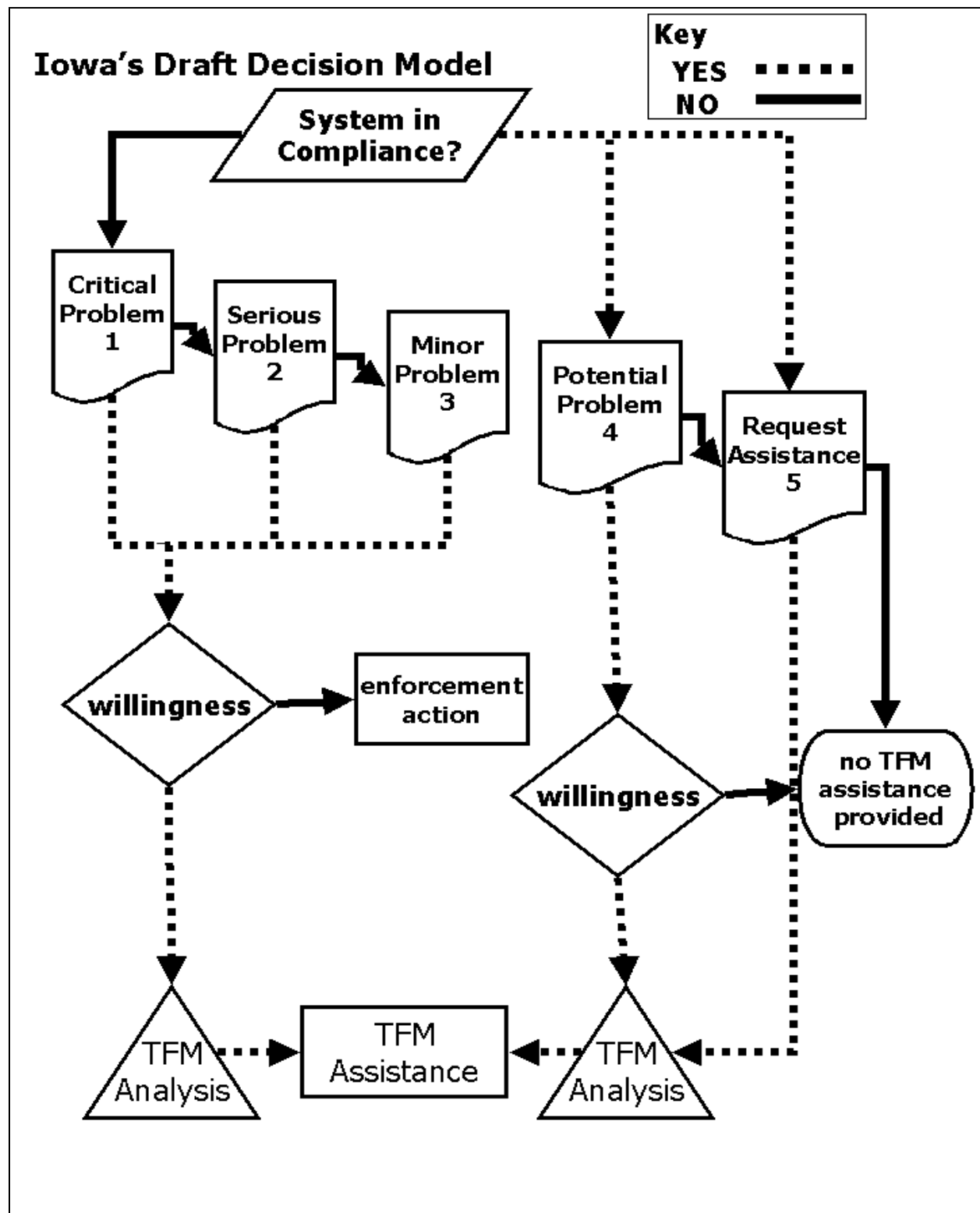


Table A2: Iowa's 1420(c)(2)(A) Criteria Definitions

1. **Compliance** – Conformance to the requirements of the Safe Drinking Water Act.
2. **Critical Problem** – Continued exceedance of an acute health based standard, or lack of monitoring for an acute contaminant. An acute contaminant is defined as a compound that, if ingested, may rapidly induce a severe and unacceptable impact on drinking water consumers. Health based standards are promulgated by the Environmental Protection Agency for both regulated and unregulated contaminants. System is chronically out of compliance.
3. **Serious Problem** – Continued exceedance of a non-acute health based standard, or chronic lack of monitoring for a non-acute contaminant. A non-acute contaminant is defined as a compound that, if chronically ingested, may induce a gradual unacceptable impact on drinking water consumers. Health based standards are promulgated by the Environmental Protection Agency for both regulated and unregulated contaminants. System is chronically out of compliance.
4. **Minor Problem** – Minor problems are defined as sporadic or one-time violations of compliance standards. (i.e. A system is temporarily out of compliance.)
5. **Potential Problems** – Potential problems are defined as problems that may lead to critical or serious problems in the future, or circumstances that may culminate in a problem due to tightening of current regulations. System is not out of compliance at this time, but may experience difficulties in the future.
6. **Willingness of Resolution** – Systems that are willing to take action to resolve inadequate technical, managerial, or financial capacity.
7. **Enforcement Action** – An action against a public water supply initiated by the Department or the attorney general to enforce the provisions of Iowa Code Chapter 455B or rules adopted pursuant to the chapter. Enforcement actions include such things as: notification of a violation, requirements for public notice, issuance of an administrative order, referral to the attorney general, attorney general proceedings, etc.
8. **TFM Analysis** – Analysis, via the Self-Assessment Manual for Iowa Water System Viability, of a system's technical, financial, and managerial capability to produce safe drinking water at a reasonable cost for the foreseeable future.
9. **TFM Assistance** – Assistance related to the technical, financial, or managerial capacity of a public water system provided by the Department or a third party technical assistance provider.

SECTION B: FACTORS THAT ENCOURAGE OR IMPAIR CAPACITY DEVELOPMENT

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 technical, financial, & managerial (TFM) capacity of public water systems. States are required to identify institutional, regulatory, financial, tax, and legal factors. A sixth factor category, "other," was added to capture issues outside of the prescribed categories.

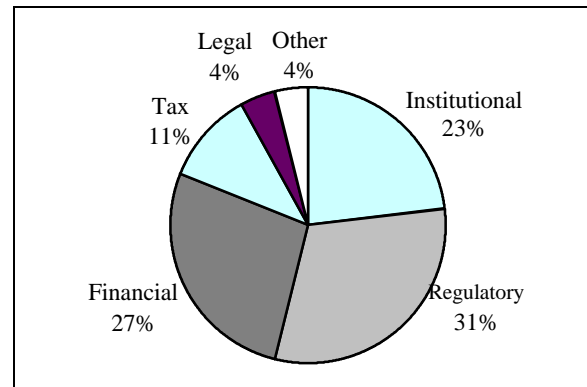
The factors operating at the Federal, State, and local level that impair or enhance water system capacity are presented in this section of the report. By definition they are:

- *Institutional – Intergovernmental, cultural, procedural or relationship issues that either enhance or impair the ability of water systems to acquire and/or maintain TFM capabilities*
- *Regulatory – Federal, State or local rules and regulations that affect TFM capacity*
- *Financial – Financial practices, policies or conditions that affect TFM capacity*
- *Tax – Federal, State or local taxation practices, policies or attitudes that affect TFM capacity*
- *Legal – Federal, State or local statutes, interpretations of laws and court decisions that affect TFM capacity*

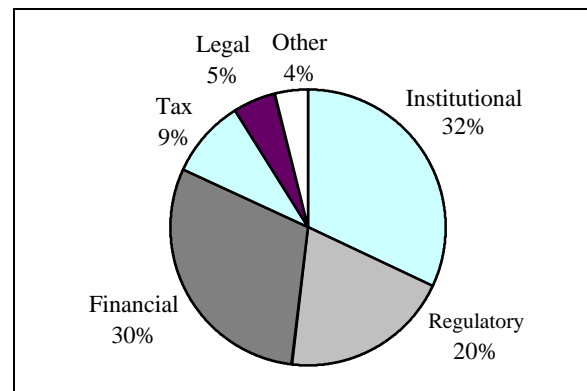
These factors were drawn from national studies, from the experience of Advisory Group members and from knowledge gained by the IDNR in administering the drinking water program over the years. The Advisory Group identified 82 factors at the Federal, State and local levels that are either enhancements or impairments to public water system TFM capacity. Table B.1 itemizes the factors by major category.

Table B1: Federal, State, and Local Factors that Affect Water System TFM Capacity

Enhancements to Capacity



Impairments to Capacity



1. Federal Factors that Enhance or Impair Public Water System TFM Capacity

A. Federal Enhancements to TFM Capacity

Institutional Enhancements:

- US EPA funding to States for the Public Water Supply Section program and to other technical assistance organizations provides excellent support for building TFM capacity at the water system level.

Regulatory Enhancements:

- The Safe Drinking Water Act has provided an important common ground for the protection of public health for 25 years. SDWA provides the statutory and regulatory basis for what States and local water systems must do at a minimum to provide safe drinking water.
- Depth and detail of research and the commitment to work with the regulated community and States in determining national standards is an enhancement to TFM capacity.
- Regulations force systems to meet (address) the issues that are most relevant to providing safe drinking water to the public.

Financial Enhancements:

- Water suppliers that meet DWSRF requirements may have capital improvements and source water protection efforts funded with low interest loans.
- US EPA designating DWSRF set-asides for capacity building programs and technical assistance is an important enhancement to capacity building.
- Continued funding for State programs (Public Water Supply Section) is an important enhancement to creating State capacity for TFM programs.

Tax Enhancements:

- Federal tax code has been changed in regards to “Contribution in Aid of Construction” resulting in reduced tax liability for investor owned utilities.

Legal Enhancements: None identified for inclusion in *Findings*.

Other Enhancements: None identified for inclusion in *Findings*.

Table B2: Federal Factors that Affect Public Water System TFM Capacity

Factors	Enhancements	Impairments
Institutional	1	6
Regulatory	3	5
Financial	3	6
Tax	1	1
Legal	0	0
Other	0	0
Total	8	18

B. Federal Impairments to TFM Capacity

Institutional Impairments:

- While considerable funding is provided, demand for oversight, assistance programs and capital expenditures outpace Congressional appropriations and administrative budget levels.
- Occasionally US EPA Regional Office and US EPA Headquarters programmatic interpretations differ, creating confusion for States and the regulated community.
- Even though US EPA’s regional office structure is designed to accommodate regional preferences, the US EPA Headquarters is perceived to be institutionally remote (removed) from the issues that are relevant to rural Iowa; especially less populated counties in the State.

- US EPA has tremendous responsibility in assisting States in protecting public health through the provision of safe drinking water. However, there is a lack of coordination between federal agencies that also have responsibility for participating in the mission of providing safe water. (E.g. USDA-RD, US Army Corps of Engineers, HUD).
- Federal officials are perceived to be beholden to bureaucratic structures that reduce flexibility in assisting States and the regulated community in meeting national drinking water protection goals.
- Federal performance measures drive State program operations – focus should be on outcome, not process.

Regulatory Impairments:

- Science vs. Politics/cost-benefit analysis. Although recent progress has been made in crafting drinking water standards that are cost effective and efficient in protecting the public health, more work needs to be done in the area of providing common-sense information on the standards that are being promoted. Congress is concerned about the implementation of health-based regulations. Senate Bill 746 is one example of legislation designed to improve regulatory development. Introductory language from S. 746 is offered below:

Regulatory Improvement Act of 1999 (Introduced in the Senate)

SECTION 1. SHORT TITLE.

This Act may be cited as the 'Regulatory Improvement Act of 1999'.

SEC. 2. FINDINGS.

Congress finds the following:

(1) Effective regulatory programs provide important benefits to the public, including improving the environment, worker safety, and public health. Regulatory programs also impose significant costs on the public, including individuals, businesses, and State, local, and tribal governments.

(2) Improving the ability of Federal agencies to use scientific and economic analysis in developing regulations should yield increased benefits and more effective protections while minimizing costs.

(3) Cost-benefit analysis and risk assessment are useful tools to better inform agencies in developing regulations, although such analyses and assessments do not replace the need for good judgment and consideration of values.

(4) The evaluation of costs and benefits must involve the consideration of the relevant information, whether expressed in quantitative or qualitative terms, including factors such as social values, distributional effects, and equity.

(5) Cost-benefit analysis and risk assessment should be presented with a clear statement of the analytical assumptions and uncertainties, including an explanation of what is known and not known and what the implications of alternative assumptions might be.

(6) The public has a right to know about the costs and benefits of regulations, the risks addressed, the risks reduced, and the quality of scientific and economic analysis used to support decisions. Such knowledge will promote the quality, integrity and responsiveness of agency actions.

(7) The Administrator of the Office of Information and Regulatory Affairs should oversee regulatory activities to raise the quality and consistency of cost-benefit analysis and risk assessment among all agencies.

(8) The Federal Government should develop a better understanding of the strengths, weaknesses, and uncertainties of cost-benefit analysis and risk assessment and conduct the research needed to improve these analytical tools.

- Rules and regulations are promulgated by US EPA without complete consideration of the ability of States and local water systems to ultimately implement them. Although the Unfunded Mandates legislation attempts to address this concern, significant costs of implementing rules still exist. Mandated rules should be implemented with regard to the characteristics of the States. Risk based assessment of need for rule implementation in each State should be considered.
- Increased number of federal regulations (which are often viewed as unfunded mandates) and continuous changes in regulations and rules create difficulties for both State regulators and regulated systems.
- State and local officials must often deal with the uncertainty associated with or arising from the process for adoption of drinking water rules and standards. An extended time period for completion of the prescribed steps (initial proposal stage, public review and comments, final adoption, etc.) is probably unavoidable. However, the process will often generate an awareness of a pending standard or requirement but will not necessarily provide the information needed to allow compliance in a timely and/or cost effective manner. For example, needed improvement projects may be delayed pending final adoption of a rule or standard and clarification about its ramifications or compliance requirement(s).
- Federal regulations should be written to balance the technical requirements for establishing rules with the capability of water systems to assimilate the requirements into their operations and management. Size and complexity of regulations is a problem when resources are devoted (wasted) to interpret rules to overcome the way they are written.

Financial Impairments:

- While the establishment of the DWSRF and the capitalization funding provided by US EPA are definite enhancements to capacity, DWSRF “Red Tape” and procedural requirements are impairments to TFM capacity building. Systems will look to DWSRF as a funding source after “easier” financial services are explored.
- It would enhance TFM capacity if the federal government would take a stronger intra-governmental approach to coordinating financing programs for drinking water systems. Since this coordination is not apparent today, the lack of coordination is an impairment to TFM capacity building efforts.
- The federal government should consider supporting vouchers or other incentives for training that would make best use of a variety of training and technical assistance programs that could be offered in a free market environment. This would be an enhancement to capacity, but the lack of this type of program is viewed today as an impairment.
- The US EPA drinking water needs survey indicates a significant need for capital financing resources. The current funding levels requested by the US EPA and approved by Congress are inadequate to meet funding needs. Both grant and DWSRF loan programs should be enhanced and given a longer authorization/appropriation period by the Congress.
- Set-asides for capacity development and improvement (TFM) programs are tied to DWSRF capitalization. There is a need for more permanent federal funding to States for technical assistance activities for TFM.
- The US EPA does not provide adequate financial resources (in the form of the Public Water Supply Supervision grant) to the Water Supply Section to completely implement the state's expanded responsibilities under the SDWA.

Tax Impairments:

- Federal tax code limitations on private facilities financing through the use of private activity bonds are an impairment to acquisition of capital for needed improvements. Private activity bonds are used either entirely or partially for private purposes and are given federal tax-exempt status.

Private activity bonds are advantageous because; they offer private entities lower interest rates than they would otherwise be able to obtain, a government can use private-activity bonds to give economic incentives to targeted activities or geographic areas.

The Advisory Committee recognizes that while private activity bonds have certain advantages, federally imposed volume caps limit the availability of private activity bonds. Each state's cap is determined by a formula computed as the greater of either \$50 per capita or \$150 million. The Committee suggests that state volume caps be reconsidered in light of the need for public water system capital improvements and the need for diverse sources of capital.

Legal Impairments: None identified for inclusion in *Findings*.

Other Impairments: None identified for inclusion in *Findings*.

2. State Factors that Enhance or Impair Public Water System TFM Capacity

A. State Enhancements to TFM Capacity

Institutional Enhancements:

- IDNR is helping to create networks among systems for technology transfer and technical assistance.
- Information, education and training for community leaders from a variety of sources (IAMU, IRWA, AWWA, IDNR, etc.). These provide for, or enhance the communication and education of community leaders.

- ICN training – Excellent educational opportunities via AWWA, Community College system, Iowa State University, and others. Allows for training without travel on the part of operators.

Regulatory Enhancements:

- The 1986 SDWA Amendments allowed the creation of State-authorized programs for issuing monitoring waivers to public water systems. Iowa's monitoring waiver program, funded in part by system user fees has created significant cost savings for public water systems.
- Enhanced coordination of water monitoring and protection programs is essential. Provide for the funding, collection and interpretation of water monitoring data into a centralized database, and making it accessible, retrievable, and understandable. The primary focus of watershed protection should be to utilize local agencies and individuals for coordinated, sustainable programs (regional or statewide). Monitoring and protection programs developed using this approach would have more scientific validity and would provide information and resources that would be truly beneficial to State leadership, water system officials and the general public in making informed decisions.
- The State needs to become pro-active in assisting systems and/or communities in identifying the problem areas and outline what options are available to make the necessary changes and/or improvements. Facilitating the long range planning which may include capitalization, consolidation, privatization, etc.
- Operator certification – Iowa has a strong operator certification program, which enhances capacity.

Financial Enhancements:

- Multiple funding sources provided by the federal and state governments [e.g., DWSRF and Department of Economic Development (USDA-RD, HUD), etc.] are available to make difficult financing challenges more viable.
- Iowa Department of Revenue and Finance Review. For public water systems subject to State oversight, the financial oversight of the Department of Revenue creates a standard for maintaining financial capability while protecting the rights of water system customers.
- IDNR's Water Supply Section receives revenues from State-imposed yearly operating fees paid by regulated water systems. This fee revenue partially supplements Legislative appropriations for Water Supply Section (WSS) program activities.

Tax Enhancements:

- Tax exempt bonds are available to fund infrastructure projects in municipalities.
- Exemption of state sales taxes for purchasing materials and exemption of property taxation for publicly owned and rural water systems.

Legal Enhancements: None identified for inclusion in *Findings*.

Other Enhancements: None identified for inclusion in *Findings*.

Table B3: State Factors that Affect Public Water System Capacity

Factors	Enhancements	Impairments
Institutional	3	6
Regulatory	4	4
Financial	3	7
Tax	2	4
Legal	1	2
Other	0	1
Total	13	24

B. State Impairments to TFM Capacity

Institutional Impairments:

- Duplication of services provided through State agencies for utilities or other State agencies – many departments have the same offerings/layers of bureaucracies.
- Lack of overall resources to provide technical support and training.
- Many very small systems. Approximately 97% of Iowa water supplies meet the US EPA definition of a small water system and 58% of Iowa systems serve populations of less than 500. See “About Iowa Water Systems” in the introduction to this document for further details.
- Confusion about use of State discretion. Due to low funding availability, the State provides minimal services. The State needs to be more proactive. For example, there is a need to move to a “Technical Assistance” mode. Current Drinking Water Program activities reflect regulatory enforcement pattern of operation.

- Interdepartmental and intradepartmental issues are impairments to capacity building activities. Intradepartmental issues relative to headquarters office control and field office discretion make programmatic implementations difficult. Also, coordination needs to be improved between water and wastewater sections of the agency. (See Appendix B.)
- Some water system compliance areas are regulated by Health Dept. (fluoride, backflow prevention programs) and others by IDNR or both. This institutional “disconnect” is confusing for the regulated community and inefficient for the State.
- Lack of communication and coordination amongst funders – enhanced commitment of State dollars and the coordination between departments for funding like projects is needed.
- State legislature not appropriating matching DWSRF funds (bonds have to be sold for matching funds) so there are no grant funds or zero interest loans.
- No uniform governmental accounting required of systems. Other financial management standards and requirements (such as periodic audit requirements) are needed.

Regulatory Impairments:

- For small systems, the ability to understand complex regulations and requirements is limited by lack of management capacity.
- Currently in Iowa there is a lack of incentives and regulatory flexibility that could encourage greater sharing of managerial and technical resources between neighboring communities.
- Public water systems do not trust IDNR use of drinking water fees and therefore do not support increases in the fees.
- DWSRF audit requirements by the bond holders are a disincentive to potential applicants.

Tax Impairments:

- Programmatic implementation of regulations that allow the approval of sub-optimal system plans, the lack of enforceable design standards, and the reluctance of the Drinking Water Program to enforce conservation of water are all impairments to system capacity.
- Imposition of the 5% Iowa sales tax on water tends to increase the likelihood that consumers will perceive their water rates to be onerous.
- Property taxes should not be assessed on water mains and equipment for small investor owned utilities. This creates a disincentive to upgrade, expand and replace capital facilities.
- Inconsistency of enforcement.

Financial Impairments:

- The perception that there is inadequate funding for resources to enable the State water supply program to provide flexibility in dealing with systems on a case-by-case basis and provide more frequent visits by field office staff.
- Lack of State regulation allows for comingling of municipal taxes and utility rates revenues.
- Heavy taxation of investor owned utilities. Current Iowa tax policies create tax liabilities for privately owned public water systems that are profit-making entities. These added costs of operation should be analyzed to determine if the tax revenues generated to the State general fund are more valuable than leveling the playing field among water systems.

Legal Impairments:

- There is an increasing use of lawsuits to get states to enforce drinking water regulations.
- Pending urban sprawl legislation could limit annexations and therefore limit the ability of a municipality to grow and expand territories. This will create a legal barrier to system consolidation goals expressed in SDWA.

Other Impairments:

- Public water supplies are sometimes identified incorrectly as private systems by some county sanitarians.

3. Local Factors that Enhance or Impair Public Water System TFM Capacity

A. Local Enhancements to TFM Capacity

Institutional Enhancements:

- The current regional and statewide meetings of various stakeholder groups (AWWA, IRWA, IAWA, IAMU) provide excellent opportunities for TFM capacity building.
- Funding for programs and activities that provide training and education at the local level (non-regulatory programs) are enhancements to capacity.

Regulatory Enhancements:

- Municipal governments have the authority to regulate and control or to prohibit cross-connections.

Financial Enhancements:

- Elected officials or Utility Board members appointed by locally elected officials have the authority to initiate financing for capital projects.

Tax Enhancements: None identified for inclusion in *Findings*.

Legal Enhancements: None identified for inclusion in *Findings*.

Other Enhancements:

- Local water systems exhibit characteristics for cooperation with other communities, agencies.

Table B4: Local Factors that Affect Public Water System TFM Capacity

Factors	Enhancements	Impairments
Institutional	2	6
Regulatory	1	2
Financial	1	4
Tax	0	0
Legal	0	1
Other	1	1
Total	5	14

B. Local Impairments to TFM Capacity

Institutional Impairments:

- Lack of public awareness of the costs of water production, treatment and distribution. Generally, customers do not realize that water is a limited natural resource and that considerable financial resources are needed to produce and deliver it safely. The Advisory Group agrees that **the public expectation** is that water be inexpensive although it is an essential product. Local policy-makers often seem to share this delusion and price water service inappropriately (in terms of meeting the full costs of delivering this commodity). There is a lack of public knowledge specific to the SDWA or the water industry as a whole.
- Inherently, the smaller water systems will always face a greater challenge since they lack the economy of scale or resources available to the larger utility systems. The continued provision of an ample supply of safe drinking water at an “affordable price” will only be possible through increased cooperation or collaborative efforts among the utilities.

- Long-term viability of a water system is enhanced when communities and their respective governing boards recognize the most critical element to accomplishing this goal – a professional staff with the access to necessary resources and funding. Small communities often do not possess the resources for sustainability. In addition, there is high turn over in management. A manifestation of a commitment to long-term viability would be the development and funding of an ongoing capital improvements program.
- Distrust of regulatory and stakeholder organizations.
- Currently there is no shared planning or sharing of information among water service entities to ensure proper planning and to avoid competing for customers. Duplication of utility services and dollars spent needs to be prevented. Duplication of effort is not cost effective and is an impairment to overall community sustainability.
- In many cases there are excellent county health departments available to assist public water systems through the work of county sanitarians. However, county health departments and IDNR have not fully developed a good working relationship. IDNR does not have the capacity to help train county staff nor to effectively coordinate to enhance TFM capacity. Due to current county budget restraints, county health departments cannot be involved in the SDWA activities.

Regulatory Impairments:

- Long range planning of water service needs should be shared by all entities affected by law to prevent duplication and proliferation of public water systems. Local land use planning entities must be active partners with the IDNR in promoting system consolidation and expansion of existing systems wherever possible versus promoting the establishment of new water systems.

- Small systems lack knowledge regarding regulation interpretation and lack resources necessary to carry out requirements.

Financial Impairments:

- There is a lack of appropriate funding mechanisms for small systems. For example, low cost financing for small projects.
- Numerous public water systems in Iowa fail to adequately finance their full costs of operations and capital investment (both expansion and replacement). Inappropriate user fee mechanisms result from underestimating system revenue needs. This prevents PWSs from keeping up with increases in operating expenses, maintaining adequate reserve funds and properly investing in the capital facilities; thus creating a premature demand for state and federal capitalization grants and loans. Citizen pressure to “hold the line” on taxes (and user fees) is placed on PWS board members who are then reluctant to raise user charges to appropriate levels.
- Economies of scale are lacking for many small water systems.
- Small water systems in Iowa lack financial resources and the knowledge of financial resource management. This current impairment to capacity could be overcome through training and technical assistance programs.

Tax Impairments: None identified for inclusion in *Findings*.

Legal Impairments:

- Lack of land use regulation contributes to the proliferation of water systems. Zoning authority (which could be used to foster consolidation and efficient expansion of systems) is often unclear.

Other Impairments:

- Specific geologic conditions (radionuclides, arsenic, and sulfate) create special compliance problems for Iowa's public water systems.

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 Viability Assessment Advisory Group 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 Advisory Group's recommendations take into consideration the following:

- The program elements are suggested in response to significant TFM enhancements and impairments identified in Section B of this *Report of Findings*. These program elements represent efforts the State of Iowa, 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 system regulators and the regulated community. The eight programs listed in this section of the report 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 IDNR Drinking Water Program or other stakeholders. Ultimate responsibility for implementation of selected program elements remains with the IDNR as the primacy agency for the State of Iowa. However, it is expected that the IDNR will seek assistance from other stakeholders and service providers in improving the TFM capabilities of public water systems.

Program Recommendations: Eight Elements for Improving the Technical, Financial and Management Capabilities of Public Water Systems

1. Currently, information is routinely collected relative to the technical capabilities of public water systems. There is a need to begin systematically collecting supplemental information regarding the financial and management capacity of systems. The Advisory Group not only recognized the need for collection of TFM information by the IDNR, but also felt that the information should be shared with the individuals responsible for the technical, financial, and managerial aspects of running the system. In addition, the group felt that a summary of the TFM information in the form of a TFM score might be helpful to the systems in attracting industry, quality operators, and recognition from the public. The group suggested the following items as possible responses to this recommendation:
 - An enhanced sanitary survey would be used to collect TFM information from the systems for later review by IDNR and other partners with expertise in financial and managerial areas.
 - The IDNR representative would attend a board of directors or city council meeting to go over the survey and answer any questions, and to encourage the management to consider long-term planning for the system.
 - A TFM “scorecard” would be developed and provided to the system following the survey. The score would be relative, but would allow for comparison between systems.

2. A significant theme identified in the process of discovering the impairments to TFM capacity of public water systems was the need to improve the knowledge of drinking water protection rules among operation and management personnel. Often rules and regulations are produced in forms that are difficult for small system operators and managers to digest. The Advisory Group felt that information provided to operators regarding current rules and future regulation development should be improved. Additionally, water systems that have limited managerial capabilities have difficulty in tracking regulatory changes from their inception as proposed rules, to their adoption as actual State standards. The following items were suggested as possible responses to this recommendation:

- Offering Continuing Education Units (CEU) for operator attendance at rules hearings or meetings.
- Development of an automatic e-mail service to keep operators updated on rule development or modification.
- Provision of a toll-free telephone service update on rule development or modification, for example an “1-800-DNR-RULE” telephone service.
- Mailing of an annual rules status update to all water system operators.
- An effort to improve management capacity through on-site board member training. Special focus would be placed on long-term planning for the system, financial management and full cost financing for the system, and regulatory environmental and financial controls.

3. The Advisory Group felt that communication and trust between US EPA, IDNR, and the water systems were lacking. As a result, they suggested the creation of a periodic newsletter. The newsletter would be provided to each water supply by the IDNR. Currently, IDNR provides a State Annual Report to US EPA, the SDWA Advisory Group and the

governor. In addition to periodic information transfer, the Advisory Group has suggested that the IDNR provide a concise CCR-style report that would include an accounting of how the annual water supply fees were spent in addition to a summary of annual compliance data and IDNR activities. The Advisory Group has also suggested that the USEPA provide the IDNR Water Supply Section with an annual CCR-style report on its performance in overseeing SDWA implementation for the State of Iowa. The report would help the Water Supply Section identify opportunities for improving the intergovernmental relationship between USEPA and the IDNR and possible ways to enhance the effective expenditure of limited drinking water protection resources.

4. The majority of Iowans are provided safe drinking water on a consistent basis. Often customers take this essential public service for granted and are not completely knowledgeable of the technical or financial requirements for providing safe water. Customers and politicians carry the perception that the provision of safe water should be enjoyed at little or no cost to consumers, which makes it difficult for water suppliers to charge the water rates necessary to operate the system in a viable manner for the long-term. The group recognized that public education related to the water supply industry would be beneficial. The following ideas were suggested as methods of educating the public:

- Development of a public relations contest, where a cash prize would be given for the best public water supply marketing strategies; for improving public awareness of the IDNR Water Supply Section, assisting systems with the local marketing of their product and services, and raising the awareness of the general public with regard to the costs of providing safe drinking water.
- Incentives for schools to include water treatment and supply as a curriculum topic.
- Accessing USEPA environmental education grant funding for these ideas.

5. Several group members identified the need to encourage partnerships between agencies and among systems. For examples local networking of water system operators and board members could result in the sharing of ideas on how to solve common problems, informal mutual aid agreements for use of equipment and personnel, and reduce the need for regulatory agency intervention. The following suggestions were made with regard to this recommendation:

- The use of ICN training sessions or peer review forums targeted to operators and board or city council members should be encouraged. Attendance at these sessions would allow operators and board/city council members to get together and network before and after the sessions.
- The Iowa State University extension service could be used as a source of technical assistance for operators.
- Partnerships between technical assistance providers such as IAWA, AWWA, IRWA, and IAMU should be encouraged through joint planning meetings with IDNR.
- US EPA should be encouraged to work more closely with USDA in providing funding for water system improvement projects and working on issues related to water and agriculture.
- Training in partnership issues could be tied to CEUs.
- Reimbursement for these types of activities should be sought from the US EPA operator certification training program.

6. The Advisory Group felt that the improvement of inter-departmental and intra-departmental communications was necessary to improving the funding for TFM related programs.

Inter-departmental communications are those among *different* agencies. Intra-departmental communications are those that occur *within* agencies. Services and missions of State agencies frequently overlap or are disjointed, with one agency providing support for portions of the water supply program, and another agency providing support for other portions. In addition, relationships between agencies are more a function of informal aspects of the organizations; that is, often personalities of persons interacting on behalf of their agencies can directly affect cooperation – both to the “good and bad of the order”. The group suggested that the following items might improve inter-agency communications:

- Increased contact with legislators and other agencies, i.e. a regular meeting scheduled with interested State legislators and State agencies to report on any activities related to drinking water or source water.
- Increased communication with the Department of Public Health to discuss drinking water program responsibilities and activities.
- A description of potential linkages should be formulated to look at how or what could be done to better serve the public in the area of drinking water provision through inter-agency comprehensive planning.

The following Advisory Group suggestions apply to the improvement of intra-agency communications:

- The establishment of meaningful organization performance measures would provide for increased confidence in the Department and would foster a higher sense of accountability for intra-agency performance.

- Field office personnel should be under the supervision of the water supply supervisor to standardize enforcement between central office and field personnel, or the compliance and enforcement bureau chief should, at a minimum, attend the regularly scheduled meetings between central office and field office staff. See Appendix B for a more detailed discussion of this proposal.
 - The currently configured Water Quality Bureau is comprised of three separate sections (including the Water Supply Section) that have responsibility for water quality and quantity issues. Drinking water protection, the mission of the Water Supply Section, is not and cannot be isolated from the missions of the Wastewater Section or the Water Resources Section. The advisory group recommends that the IDNR management address this issue of intra-Bureau communications and sub-organizational interaction. This would improve the effectiveness of the Bureau in implementing the Safe Drinking Water Act.
7. Small systems face the challenge of acquiring capital resources for improving or replacing water system infrastructure. This is especially true for non- governmental systems that do not have access to traditional government-sponsored capital financing programs (e.g., Community Development Block Grant Program, USDA Rural Development). Even with the traditional funding options, small systems may have difficulty accessing capital financing. The advisory group recommends that the IDNR sponsor a meeting or series of meetings where capital financing agencies, public finance specialists and public water system stakeholder groups could discuss innovative techniques for financing small system capital improvements. The meetings would not only identify opportunities for innovative financing instruments to be developed, but would also identify institutional, legal and financial barriers to the use of those tools.
 8. For a number of years, the Water Supply Section of IDNR's Environmental Protection Division has been burdened with having to deliver a State drinking water protection program with limited resources. The scope of the drinking water protection program has been dramatically increased because of the last two amendments to the Safe Drinking Water Act in 1986 and 1996. The perception of the Advisory Group is that personnel resources have not kept pace with the new responsibilities of the State program. The Advisory Group recommends that a third-party assessment of current and future program resource needs provide information needed to overcome this perception and allow the Advisory Group and other stakeholders to support the financial and staffing resource needs in the Drinking Water Program.

The Advisory Group recognizes that the proper implementation of a TFM capacity strategy is tied directly to the availability of program resources. The Group, as concerned stakeholders, believes that it (as well as the public) should be involved in examining existing program resources and what supplements might be needed to implement the strategy. Additionally, the Advisory Group could work on behalf of the public water systems that would benefit from TFM programs to help persuade policy makers to provide appropriate resources for strategy success. While the public review of the State's implementation plan for the strategy is expected at some point, the Advisory Group believes that its early involvement in the process is important.

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

This *Report of Findings* offers the Advisory Group's suggestions about how the Iowa Department of Natural Resources might develop a strategy for improving the technical, financial and managerial capabilities of public water systems. In developing that strategy, the Advisory Group suggests that IDNR 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. IDNR 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 US 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 IDNR should keep careful records of assistance programs aimed at assisting water systems in improving capacity. The Advisory Group 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, IDNR 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 US EPA State Drinking Water Information System 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 that prepare capital facility management plans, water system plans, emergency 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 PREPARING THE IOWA CAPACITY DEVELOPMENT REPORT OF FINDINGS

The IDNR called upon its Viability Assessment Advisory Group to provide a sounding board on issues for developing a set of findings for improving capacity that could then be presented to the general public. Advisory Group members, by combining their varied backgrounds and different perspectives deliberated to ensure that the group's *Report of Findings* would be balanced and comprehensive.

However, the Advisory Group 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 Advisory Group examined the question of who else should be involved in the process of preparing a drinking water capacity development strategy. They concluded that certain key interest groups, beyond those already represented, should be encouraged to participate with the Advisory Group if at all possible. Additionally, other interested persons and organizations were invited to provide information regarding their position through an interview process or in writing. Finally, the public at large was engaged to the greatest extent possible through a series of public involvement initiatives. A Questionnaire was developed to facilitate public input.

Other Public Involvement Initiatives

The Advisory Group agreed that their recommendations should be presented to the public at large, with an opportunity for comments and suggestions. Various methods were considered, including training, publications, press releases, and public meetings. The IRWA, Iowa Access, IAWU, Iowa Association of Counties, AWWA, Iowa League of Cities, Iowa Groundwater Association and Iowa Well Water Association will all publish relevant information in their newsletters. The information will be available through the Web Sites of the IDNR, IRWA, IAMU, US EPA, EFC, AWWA, Iowa League of Cities, Des Moines Water Works, Iowa Access, and the Iowa Association of Counties.

Presentations will be given at the IRWA Conference in September 1999, the IAMU Conference in November 1999, AWWA Regional Meetings, the Annual AWWA and IRWA Meetings in February and March of 2000. Three public meetings will occur throughout the State between October and November 1999. A meeting in Western Iowa will take place in early October 1999 corresponding with the AWWA Council Bluffs evening session. Central Iowa will be represented in late November 1999 in conjunction with the AWWA Des Moines short course. A meeting in Eastern Iowa will be held in mid-November 1999 in either Cedar Rapids or Iowa City. A joint meeting of the Iowa State Association of Counties and County Sanitarians is also being planned. Public comments will be received through December 15, 1999. Review of the comments will take place in December, and be incorporated in to a final *Report of Findings*.

APPENDIX A: VIABILITY ASSESMENT ADVISORY GROUP MEETING HIGHLIGHTS

The Iowa Viability Assessment Advisory Group met 7 times in 1998-1999 to consider developing a capacity strategy for public water systems. During the month of July 1999 the draft of the Iowa Capacity Development *Report of Findings* was prepared using input from Advisory Group members, IDNR management, and public comments. 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 IDNR at 515-281-5130.

Highlights of the Viability Assessment Advisory Group

December 9, 1998

Bill Jarocki of the EFC gave a presentation on the SDWA requirements for capacity development. The Advisory Group began work on Section 1420(c)(2)(E), identifying a list of stakeholders that should be part of the strategy process. The list was divided into three categories. "Typical Participants" are those participants who frequently assist the IDNR in developing rules and strategies for public drinking water systems; "Typical Participants Not In Attendance" are those participants who were invited to the meeting but did not attend, and/or those who had been asked to serve on the SDWA Advisory Group but had since stopped attending; and "Non-Typical Participants" are those participants whose opinions are not normally sought by the IDNR but might desire representation in the development of the Iowa Viability Strategy. Together, these three groups comprise the "Viability Assessment Advisory Group." A tentative timeline was established as follows:

- January through April, 1999 – Work on 1420(c)(2)(A-E)
- May, 1999 – Staff Prepare *Report of Findings*
- June, 1999 – Review/Approve *Report of Findings*

- July/August, 1999 – Public Hearings, Comments
- September, 1999 – Approve Final *Report of Findings*, Submit to IDNR

January 13, 1999

Bill Jarocki gave a review of the SDWA requirements for viability assessment. The Advisory Group then began work on Section 1420(c)(2)(A), the methods or criteria that the State will use to identify and prioritize those public water systems most in need of improving technical, financial, and managerial capacity. The Advisory Group discussed a model developed by the State of Missouri and proposed some changes to adapt the model to fit Iowa's State drinking water program. The Advisory Group then produced a draft Decision Model, using compliance as the primary factor in determining which systems should receive TFM assistance. The systems will then be broken down into Critical Problems, Serious Problems, and Minor Problems. Systems with no problems would also be allowed to ask for assistance. Systems that are willing to solve the problem will go through TFM analysis and will then be eligible for TFM assistance. Systems that are not willing to fix the problem will be routed to legal enforcement action. A discussion as to how to define the difference between TFM analysis and TFM assistance took place. Analysis is used to assess the areas in which a system needs assistance, whereas assistance will help build systems' capacity. The Advisory Group felt it was appropriate to keep analysis and assistance separate on the flow chart. The flow chart that was developed is only a working model, and open to future review and editing. The Advisory Group then began discussing Section 1420(c)(2)(B), a description of the institutional, regulatory, financial, tax, or legal factors at the Federal, State, or local level that encourage or impair capacity development. Bill Jarocki provided a matrix

relating to this item and requested each Advisory Group member to provide information in the tables before the next meeting.

February 17, 1999

The Advisory Group reviewed their previous work on Section 1420(c)(2)(A), the methods that the State will use to identify and prioritize the public water systems most in need of improving TFM capacity. The model was revised to include the category “Minor Problem” in addition to Critical, Serious, and Potential Problems. Minor problems would be classified as sporadic or one-time exceedances of a health based standard or lack of contaminant monitoring. “Legal Enforcement Action” was changed to “Enforcement Action,” and the definition was revised to include monitoring violations and public notification procedures since these are enforceable. The flow chart is still a working model, and changes can be made in the future if needed. The Advisory Group then moved on to Section 1420(c)(2)(B), a description of the institutional, regulatory, financial, tax, or legal factors at the Federal, State, or local level that encourage or impair capacity development. Each member shared the impairment/enhancement factors that he or she had identified since the previous meeting. Factors that impair or enhance capacity development at the Federal and State level were compiled into a comprehensive list. There was insufficient time to address the local factors.

March 17, 1999

The Advisory Group completed its work on Section 1420(c)(2)(B), identifying institutional, regulatory, financial, tax, or legal factors at the local level that encourage or impair capacity development. The Advisory Group then went through each set of summary sheets regarding factors that enhance or impair capacity at the Federal, State, and local levels and decided as an Advisory Group those factors that should be included in the Strategy. Bill Jarocki committed to writing a narrative description of each of the selected factors. The original timeline was revised as follows:

- May, 1999 – Section 1420(c)(2)(C)
- July, 1999 – Advisory Group Review of Draft *Report of Findings*
- September, 1999 – Public Review of Draft *Report of Findings*
- October/November, 1999 – Final Advisory Group *Report of Findings* to IDNR Management
- February/March, 2000 – IDNR Implementation Plan
- April, 2000 – Final Public Review of Strategy
- May/June, 2000 – Submit Strategy to US EPA
- August 6, 2000 – Statutory Deadline

Bill Jarocki was chosen to develop a description for how the State will establish a baseline and measure improvements in capacity with respect to national primary drinking water regulations and State drinking water law – Section 1420(c)(2)(D) of SDWA.

May 5, 1999

The Advisory Group continued its discussion of Section 1420(c)(2)(B), the institutional, regulatory, financial, tax, or legal factors at the Federal, State, or local level that encourage or impair capacity development. From a list of factors compiled during previous meetings, Advisory Group members determined which factors should be addressed specifically in the Strategy. The Advisory Group then began a discussion of Section 1420(c)(2)(C), a description of how the State will use the authorities and resources of the SDWA or other means to assist public water systems in compliance efforts, encourage partnerships between suppliers to enhance the TFM viability of the systems, and assist supplies in the training and certification of operators. The Advisory Group began discussing the development of ideas for programs to address the impairments and enhancements identified in Section 1420(c)(2)(B).

June 4, 1999

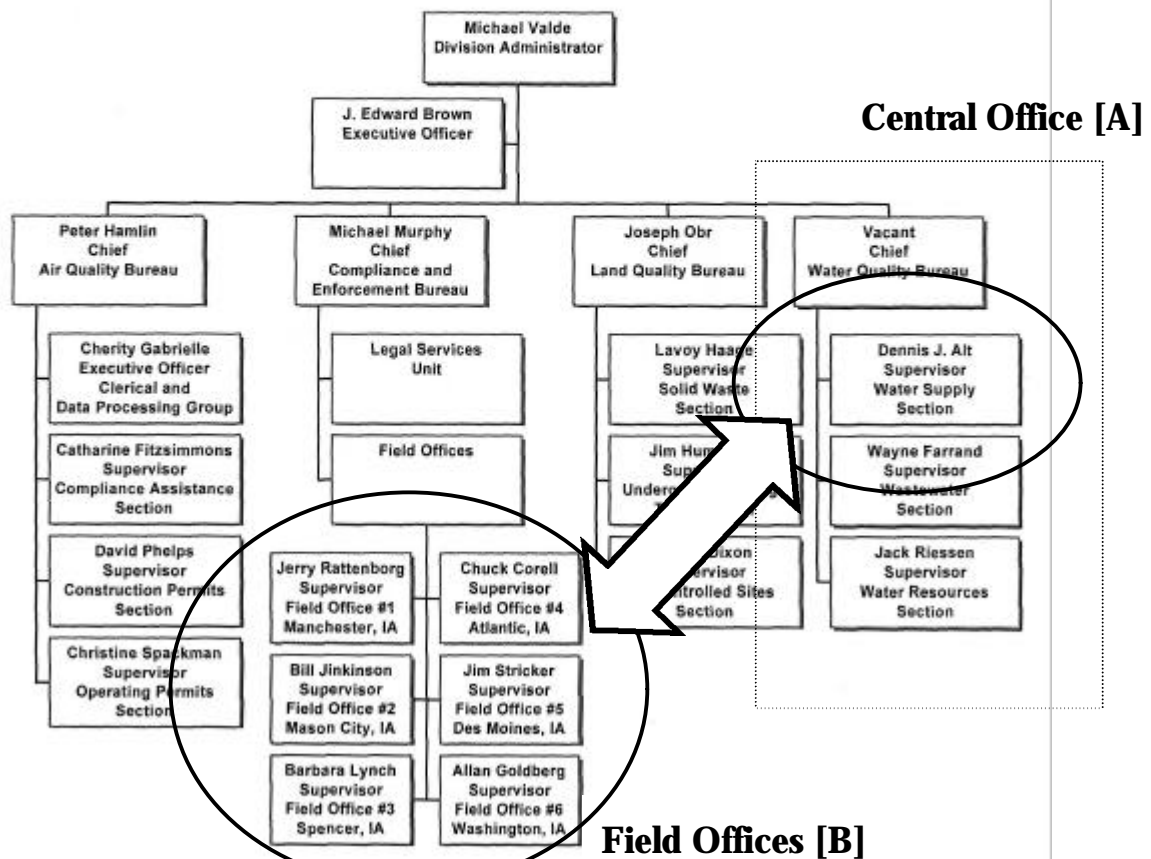
The Advisory Group continued its discussion of 1420(c)(2)(C), identifying programs that will be used to assist systems in complying with national primary drinking water regulations, encourage the development of partnerships between public water systems, and assist systems in the training and certification of operators. The Advisory Group determined eight areas for discussion: 1) TFM Scorecard, 2) Improve information to operators on rules/regulations, 3) US EPA and IDNR issue Consumer Confidence Reports to systems, 4) Lack of inter-/intra-departmental communications, 5) Educate the public, 6) Encourage partnerships, 7) Money for capital projects, and 8) FTE/Agency resources. The discussion closed with the question of how to get the *Report of Findings* to the public.

August 25, 1999

The Advisory Group discussed section 1420(c)(2)(E), public involvement initiatives to present the information to the public at large. The *Draft Report of Findings* was discussed in great detail.

APPENDIX B: INTRADEPARTMENTAL IMPAIRMENTS TO TFM CAPACITY

**Environmental Protection Division
Table of Organization**



The Advisory Group identified two important institutional issues as probable impairments to the TFM capabilities of public water systems.

1. The first issue is the need to improve the working relationships between the three operational units within the Water Quality Bureau. One reason is that each of the units has a role in some aspect of drinking water protection. Another is that field office staff is responsible for serving one or more of the sections. Implementation of a TFM strategy depends upon good working relationships between the sections and a complete understanding of each unit's role in improving capacity of systems.

2. The second issue concerns the organizational relationship between the Water Supply Section [A] and the Field Offices [B]. Field office personnel who are responsible for certain PWS oversight report directly to Field Office supervisors, not the supervisor of the Water Supply Section. In addition, the field office staff has other environmental protection functions that could supercede TFM Strategy goals and objectives. This could lead to uneven implementation of the strategy within the State as the field offices deal with periodic competing demands for staff services