

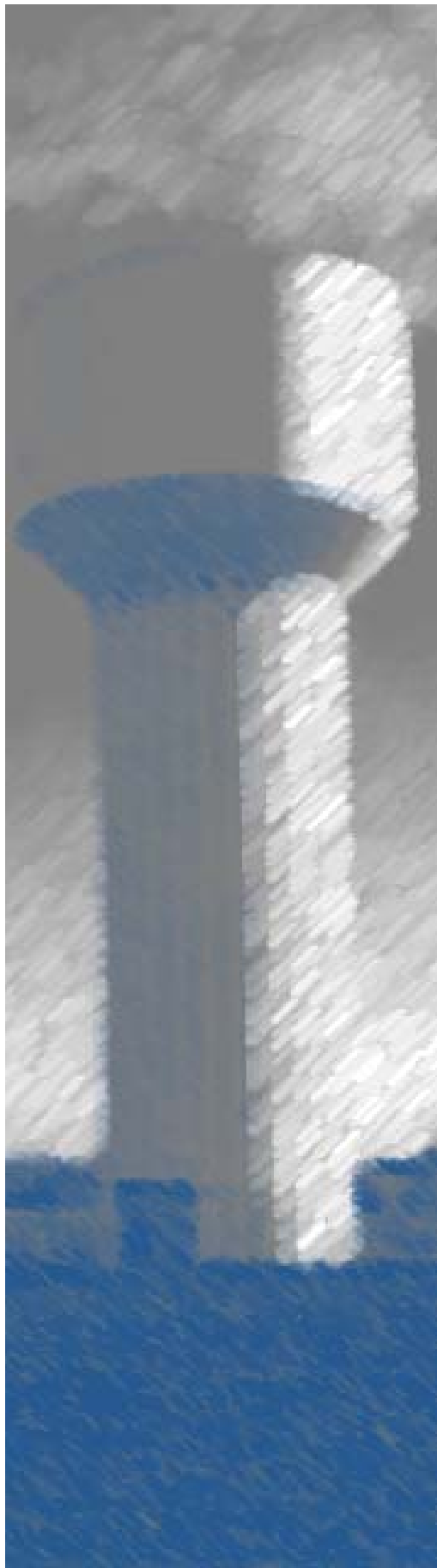


**REPORT TO THE GOVERNOR**

**Iowa's  
Capacity  
Development  
Program**

**IOWA DEPARTMENT OF NATURAL RESOURCES  
ENVIRONMENTAL SERVICES DIVISION  
WATER SUPPLY PROGRAM  
SEPTEMBER 30, 2005**

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## EXECUTIVE SUMMARY

Over the past five years, the Iowa Department of Natural Resources (IDNR) has worked to implement a strategy to assist public water systems in developing their technical, financial and managerial capacity as required by the federal Safe Drinking Water Act (SDWA) amendments of 1996. In 2002, IDNR submitted its first report of progress in implementing the strategy and its effectiveness in improving the capabilities of water systems as required by the SDWA, which requires submittal of these reports to the governors of each state on a three year interval.

The capacity development strategy was developed in 2000 with the assistance and input of a stakeholder group called the Viability Assessment Advisory Group. Over a twelve-month period, the Advisory Group developed 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. These recommendations were used to develop the final strategy, which was approved by the Environmental Protection Agency in 2001 following a period of public comment.

This report discusses each of the Advisory Group's recommendations and the elements chosen to implement the recommendations and includes a summary of IDNR activities with respect to each element. Progress has occurred with respect to some of the elements, while others have not been addressed. Since the capacity

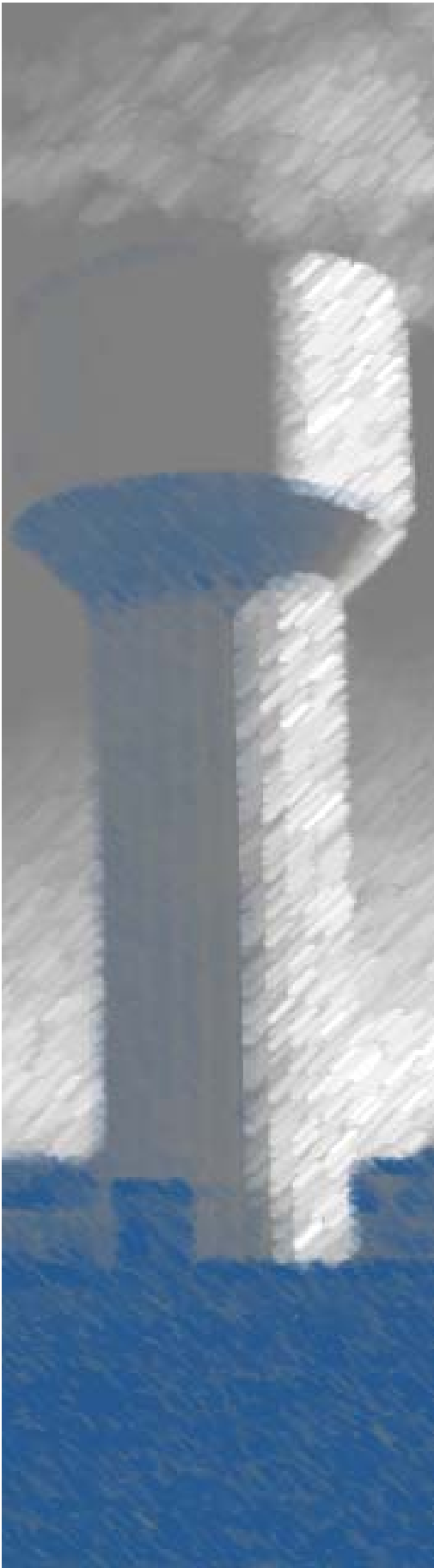
development strategy is meant to be a "living document" that reflects the changing times, IDNR reconvened the Advisory Group this year and discussed modifying the strategy to more accurately reflect the capacity development efforts being undertaken in Iowa. The Advisory Group felt that of the recommendations contained in the group's original Report of Findings, the recommendation for water board/city council member education was the most important and that resources dedicated to capacity development in Iowa should be directed toward achieving

this goal. With that in mind, the capacity development strategy has been modified to focus the group's original recommendations toward board/council member training.

The amount of resources directed toward the water supply program remains a concern to all Advisory Group

members, but progress is occurring despite IDNR's resource limitations. Overall public water system compliance rates remain high and the technical, financial and managerial capabilities of public water systems are improving with the assistance of Drinking Water State Revolving Fund loans, third-party technical assistance, and IDNR staff efforts. The Department will continue to implement the strategy with the ultimate goal of reducing the need for enforcement action and providing overall improvement in the safety of drinking water for the citizens of Iowa.





## OVERVIEW

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In 1996, Congress re-authorized and amended the Safe Drinking Water Act (SDWA). One of the amendments added a new section entitled “Capacity Development Strategy.” Capacity is generally defined as a system’s ability to provide safe, high-quality drinking water to its customers at a reasonable cost for the foreseeable future, and is referred to as “viability” in the Iowa Code.

This new section of the SDWA, among other things, required each state to develop and implement a strategy by August of 2000 to assist its public water systems in acquiring and maintaining technical, managerial, and financial capacity. Failure to do so would have resulted in a withholding of up to 20% of federal grant funds for the Drinking Water State Revolving Fund (DWSRF) program. The SDWA required that the state consider, solicit public comment on, and include as appropriate five different elements in developing its strategy. The elements considered were:

- 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 SDWA amendments also require each state, within two years of adopting a capacity development strategy and every three years thereafter, to submit to its Governor a report on the efficacy of the strategy and progress made toward improving the technical, managerial, and financial capacity of public water systems in the state. The report must also be made available to the public. The intent of this report is to fulfill the SDWA’s statutory requirement.

# DEVELOPMENT AND IMPLEMENTATION OF IOWA'S CAPACITY DEVELOPMENT STRATEGY

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During 1999 and 2000, IDNR convened a group of stakeholders collectively called the Viability Assessment Advisory Group for a series of ten meetings to discuss the five elements requiring consideration prior to development of the state's capacity development strategy. This group produced a document entitled, "Report of Findings on Improving the Technical, Financial and Managerial Capacity of Iowa's Public Water Systems," attached as Appendix A.

The Report of Findings was made available for public comment in October and November of 1999. The Department notified every public water system of its availability, posted it on the IDNR website, issued a press release highlighting its availability, and held three public meetings across the state. Comments received were placed in an appendix to the Report of Findings and were utilized during preparation of the Capacity Development Strategy. The Report contained eight recommendations for use in the capacity development strategy.

The IDNR reviewed the findings, recommendations, and public comments to determine which recommendations were feasible and would assist Iowa public water systems in improving their technical, managerial and financial skills and enhance their capacity. The resulting recommendations were then incorporated in the Capacity Development

Strategy. The strategy was submitted for EPA review in August of 2000 and was approved in early 2001; it was also reviewed and adopted by the Iowa Environmental Protection Commission at that time.

Implementation of the strategy has been ongoing over the past five years and a report to the governor was developed in 2002 to assess the efficacy of strategy during the first two years of implementation. The strategy is a dynamic document that may be modified as the Department finds it necessary to make changes to achieve capacity development goals. As a result, the Viability Assessment Advisory Group was reconvened when IDNR felt it was time to modify the strategy during 2005 to include activities that were not part of the strategy but were improving the capacity of systems, and to eliminate activities that were not likely to be implemented. During the meeting, the group determined that their original findings were still valid, but that the department should focus its limited resources toward the element that would provide the most benefit to systems. It was decided that the strategy should focus on water board/council member training during the next three years, even though this has been recognized by many states to be a difficult goal to achieve. The amended strategy is included as Appendix B to this report, which summarizes the accomplishments of the program during the past three years.

## DISCUSSION OF STRATEGY ELEMENTS

In preparing for this report, IDNR and the Viability Assessment Advisory Group discussed the efficacy of the program, the progress IDNR has made in improving the technical, financial and managerial capabilities of Iowa water systems, and barriers to the process. Each of the elements listed in the strategy was reviewed and the implementation progress discussed. The feasibility of each element was also reviewed in light of the activities undertaken within the last three years.

The stakeholders noted that the limited resources of the water supply program have prevented the state from reaching all of its capacity development goals. When the original strategy was written in 2000, several of the stakeholders' suggestions were not adopted because of resource constraints. In the two years that followed, the state experienced a budget shortfall and the amount of

funding provided by the legislature to the water supply program decreased significantly. During the past three years, the water supply section was able to adopt and collect fees for construction permitting and as a result has been able to take advantage of set aside funds available through the Drinking Water State Revolving Fund. During this same time period, however, the department has gone through reorganization and some activities have been shifted to the new water supply operations section and field services bureau. With this change, implementation of some of the elements contained within the strategy has become more challenging.

Following is a summary of each strategy element, the activities that have occurred to date, and any modifications suggested by the Advisory Group members.

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### RECOMMENDATION 1:

#### COLLECT ADDITIONAL TECHNICAL, FINANCIAL, AND MANAGERIAL INFORMATION FROM PUBLIC WATER SYSTEMS

**REASONING:** The Department currently collects information from water systems once every three to five years via inspections called "sanitary surveys." The primary purpose of the survey is to evaluate the technical aspects of the system. Because of the federal requirement to improve the financial and managerial skills of water systems as well as the technical aspects, it was decided that one of

the barriers to capacity development was the lack of financial and managerial data related to water system operations.

**ELEMENT 1:** Develop and use an enhanced sanitary survey to collect technical, financial, and managerial information.

- The IDNR has developed and begun the use of an enhanced sanitary survey that is performed using a Personal Digital Assistant (PDA). The enhanced survey includes several questions that address the financial and managerial capacity of the system in addition to the technical questions that have traditionally been part of the surveys. The electronic sanitary survey program allows the inspector to set up a survey specific to each system they will be surveying, including only the questions that pertain to the infrastructure at that system. They can take the pre-determined list of questions into the field with them



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The City of Storm Lake added treatment plant redundancy in 2003 to ensure adequate drinking water supply.

on the PDA, answer the questions in the field, and download the information into a database upon their return to the office. The program also generates an inspection report and allows the inspector to track any deficiencies that are in need of a response to comply with Environmental Protection Agency (EPA) regulations. The data collected in these enhanced surveys will be used to determine which systems are in need of technical, financial, and managerial assistance.

**ELEMENT 2:** Department personnel would attend the water board or city council meeting to go over the sanitary survey report, answer questions, and encourage long-range planning.

- Field office inspectors attend board and city council meetings upon request to discuss sanitary survey results and to encourage planning. Water operators often request the presence of field office staff to explain the inspection reports to their board or council members so that the governing body understands the need for capital improvements. IDNR has been willing to accommodate these requests within time and resource constraints.

**ELEMENT 3:** Develop a “scorecard” approach to evaluating enhanced sanitary survey results. Stakeholders felt that specific scores in the areas of technical, financial and managerial capacity would provide the water system operators with a relative idea of how they were performing, especially if the scores of the neighboring systems were made available.

- The scorecard approach has not been developed or implemented. The state of Kansas uses a survey that is mailed out once every three years to all public water systems to collect baseline technical, financial, and managerial data, and IDNR was considering using a similar approach. The Advisory Group inquired about whether the questions in the Kansas survey were already part of the new enhanced sanitary survey. Many of them were included in some form, so the group decided to gather the information from the survey questions that were already being asked every three to five years instead of requesting the same information again via a survey. Points will be assigned to the questions and the scorecard will be printed out in a format (possibly a postcard) that can be mailed to the governing board for the water utility or the city council. The postcard may also include the scores of the two nearest water systems so that the governing body of the system would have a relative idea of how well their system is running. To provide incentive for obtaining a high score, IDNR would post a list of the highest scoring systems on its website with a designation of excellent operation. The list would also be provided to the media and the department might develop a logo that could be used by systems obtaining the designation on their correspondence.

It is hoped that this designation might be used by cities to attract new business and enhance economic development opportunities, thus providing incentive for governing board/council members to become more interested and aware of the water system operations.

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## RECOMMENDATION 2:

**IMPROVE THE KNOWLEDGE OF PUBLIC WATER SYSTEM OPERATORS REGARDING REGULATIONS AND IMPROVE THE KNOWLEDGE OF THE PUBLIC WITH REGARD TO THE PRODUCTION OF DRINKING WATER**

**REASONING:** Stakeholders identified the lack of knowledge about drinking water protection rules among operation and management personnel as a significant barrier to capacity. Many times the language and format used for rules and regulations are difficult for the operators to understand. The group felt that operators should be provided with additional information when current rules are modified or new rules are proposed. On the manage-

ment side, water board and city council members are usually responsible for the financing and management of water systems, but they generally lack the technical knowledge to make good decisions regarding rates and capital improvements.

**ELEMENT 1:** Offer Continuing Education Units (CEUs) for operator attendance at rules hearings or meetings.

- Certified water system operators must earn a specified number of CEUs every two years depending on the level of their certification. The Department has offered CEUs for operator attendance at several meetings and rules hearings and will continue to offer this opportunity for education related to the drinking water rules and regulations when it is feasible. Recent rule changes now require certified operators for smaller public water supplies, which promotes increased awareness of rules and regulations among all water supply operators.

**ELEMENT 2:** Develop an automatic e-mail service to keep operators updated on rule development or modification.

- The Department began collecting water operator's e-mail addresses as part of the information collected for certification renewal during 2001 and water system e-mail addresses as part of the annual fee billing in 2002, but until recently, it was not feasible to send e-mail to this large list of addresses. The department has investigated the use of a list serve to provide information to operators and owners



of water systems and has found that it is now economically viable and fairly easy to accomplish. This will allow IDNR to electronically deliver information in a timely manner to certified operators at a relatively low cost to the department. The list serve should be in place by November of 2005. Information on new or modified rules will be provided to operators and other interested parties that request inclusion when it becomes available.

**ELEMENT 3:** Mail an annual rules status update to all water system operators

- This element has not been developed or implemented because of the time required to produce the report and the cost of mailing to more than 2,000 certified operators. The group felt that this would no longer be necessary once the list serve was in operation. One objection was that every certified operator might not have an e-mail address, but everyone agreed that there is public access to the internet available within driving distance. All upcoming rules activity is posted on the IDNR website through a DNR Rules link, so even if an operator did not receive rules updates through the list serve, they do have access to the rule making schedule each year.

**ELEMENT 4:** Provide on-site board or council member training, focusing on long-term planning, financial management and full-cost financing

- The Department has access to federal funding for the provision of technical assistance to small water systems through the Drinking Water State Revolving Fund capitalization grant. Up to two percent of each year's federal grant may be used for this assistance, and IDNR has generally used these funds to contract with various organizations to provide different types of technical assistance to systems serving less than 10,000 people. At least one of these contracts has focused on providing technical, financial, and managerial information to board/council members in addition to city clerks and certified operators, but the number of board/council members attending has been very limited. The state of Kansas has developed an innovative, interactive training program for board/council members available in the form of a book with a Compact Disk that covers every aspect of owning a public water system. Technical assistance providers present training sessions to board/council members upon request and



systems that have at least 50% of their board/council members complete the training are given extra priority points on DWSRF loan applications. The department is interested in developing a similar tool for Iowa public water system owners and could utilize funds from one of the DWSRF set-asides for this activity.

Given the Viability Assessment Advisory Group's intention to focus on board/council member training during the next three years, it is IDNR's intent to put out a Request for Proposals for this board/council member training tool within the next six months so that this tool can be developed and in place prior to the next report. The incentives for attending the training might include a slightly discounted interest rate for DWSRF loans or a reduced origination or loan servicing fee should the system apply for DWSRF funds.

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## RECOMMENDATION 3:

**DEVELOP MORE TRUST IN THE RELATIONSHIP BETWEEN IDNR AND THE WATER SYSTEMS IT REGULATES BY PROVIDING INFORMATION ON ACTIVITIES UNDERTAKEN EACH YEAR AND ACCOUNTING FOR FEE EXPENDITURES**

**REASONING:** Mistrust between the EPA, IDNR and water systems was identified as a barrier to the capacity of water systems.

**ELEMENT 1:** Create a periodic newsletter to be sent to each water supply by IDNR.

- The newsletter has not been developed or implemented because of resource limitations but the stakeholders felt this element should be retained as part of the strategy. Developing periodic newsletters summarizing recent developments, updates, etc. requires considerable effort if the newsletter is to be well written, accurate, and readable. With the development of the list serve, the newsletter could easily and inexpensively be distributed to all certified operators and interested parties by electronic means. Staff members have been assigned to develop the newsletter and the first one should be distributed by the end of 2005, if not sooner. It will also be placed on the IDNR website so that anyone with internet access is able to obtain the newsletter.

**ELEMENT 5:** Provide IDNR standard forms for water supplies in electronic form to eliminate paperwork.

- During the past five years, state government has made it a goal to provide information to the public electronically whenever possible. Many forms have been converted to electronic documents, but there remain some difficulties with accepting electronic submittals of some information. This, for example, would include Monthly Operating Reports that legally require the signature of a certified operator. As these issues are resolved and electronic submittals become more and more standard, IDNR will continue to make as many forms as possible in electronic format to eliminate paperwork.

**ELEMENT 2:** Prepare an annual report for the water systems to account for spending of the annual fees paid by the water systems.

- The Department has not prepared and distributed reports on the use of fees, but funds expended by the water supply program, including fees, general fund appropriations, and EPA grant funds are well documented on an annual basis through the existing state budget process. Specific water supply staff activities are also tracked and accounted for on an annual staff person basis. The stakeholders agreed that an annual budget report would be a valuable tool in obtaining the support of the water systems when additional funds are needed, either from the legislature or through an increase in water system fees. With the development of the newsletter, this information could be included on an annual basis to let the water systems and the public know how fees and state and federal appropriations are being spent.

## RECOMMENDATION 4:

### IMPROVE CUSTOMER KNOWLEDGE OF WATER SYSTEM PERFORMANCE AND FINANCING

**REASONING:** Most Iowans have access to a source of safe drinking water on a consistent basis. Because of this, many people take the provision of this essential service for granted. Customers and elected officials carry the perception that safe drinking water should be enjoyed at little or no cost to consumers, making it difficult for water systems to charge the rates necessary to operate the system over the long term.

The stakeholders felt that public education with regard to water supply would be valuable and beneficial.

**ELEMENT 1:** Provide incentives for schools to include water treatment and supply as a curriculum topic.

- Each year, the Department co-sponsors the Children’s Water Festival; a one-day event designed to bring fifth-graders from across central Iowa together to learn about water. Teachers are provided with curriculum materials and asked to incorporate them into the classroom prior to the Festival. Because of the benefits associated with impressing the value of safe water on young children, who will in turn tell their parents about it and grow up to be more knowledgeable consumers, the stakeholders felt that IDNR should continue to strive to provide additional



resources for the Festival. Since many schools do not have funding to transport the children to the Festival, schools not within close proximity to Ankeny have a lower participation rate in the event. To increase the number of schools that are able to participate, IDNR proposed providing funding to schools to reimburse them for transportation costs to the Festival.

**ELEMENT 2:** Access EPA environmental education grant funding to assist with the implementation of Element 1.

- The Department has not pursued this yet because of resource limitations, but is aware that the Environmental Finance Center at Boise State University has a link to educational grant sources on its website.

The department could include a link to the BSU website on its Drinking Water page to encourage systems or stakeholders interested in pursuing educational grants to apply for funding. The IDNR will not plan to pursue EPA funding to assist with the implementation of Element 1, but will utilize funds from the DWSRF set-asides that can be used for implementing state capacity development strategies.

## RECOMMENDATION 5:

### IMPROVE PARTNERSHIPS AMONG OPERATORS, AMONG REGULATORY AGENCIES, AND AMONG TECHNICAL ASSISTANCE PROVIDERS

**REASONING:** Stakeholders identified the need to encourage partnerships between agencies and among systems. They felt that this might result in the sharing of scarce resources and reduce the need for regulatory agency intervention.

**ELEMENT 1:** Use ICN training sessions or peer review forums targeted to operators, board/city council members and city clerks.

- The stakeholders felt that training offered via ICN offers the operators in regional areas a networking opportunity. The Department has not conducted any ICN training since the capacity development strategy was written but will encourage technical assistance providers requesting grant funds as part of the current request for proposals to consider offering training via ICN. Additionally, stakeholders commented that partnerships and networking are occurring at other meetings, especially the regional meetings of the Iowa Section of the American

Water Works Association. As technology progresses, the department will also encourage training by web cast so that operators and system governing boards/councils will be able to obtain training without traveling long distances.

**ELEMENT 2:** Use the Iowa State University extension as a source of technical assistance for financial issues to operators and city clerks.

- The Department has not contracted with the extension service as a source of technical assistance, but this idea still has merit. Because the department does not have a direct relationship with city clerks, it was thought that this might be a way to reach this audience with financial and managerial topics related to water supply systems. Since the League of Cities also has a relationship with city clerks, IDNR is also considering discussing the possibility of offering training not only to city clerks, but also to water board/council members. The training tool discussed in Recommendation 2, Element 4 might be used to provide information on the managerial aspects of operating a water system to this audience.

**ELEMENT 3:** Encourage partnerships between technical assistance providers such as the Iowa Association of Water Agencies, the American Water Works Association, the Iowa Rural Water Association, and the Iowa Association of Municipal Utilities through joint planning meetings with IDNR.

- The department does encourage partnerships among these providers by participating in meetings of the Joint Operator Certification Committee and the Water Alliance. It is hoped that the newsletter mentioned in Element 2, Recommendation 2 might also highlight the activities of our technical assistance providers and provide them the opportunity to work together on projects as their areas of expertise are required.

**ELEMENT 4:** 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.

- The Department has pursued this element by assigning a senior staff member to work on agricultural issues as they relate to IDNR programs, but the influence

of the department is limited when trying to encourage two federal agencies to work together. This element is recommended for elimination in the amended strategy.

**ELEMENT 5:** Encourage and assist small systems in developing local cooperative buying agreements to procure chemicals and equipment at more competitive rates.

- One of the obstacles stakeholders identified for small systems was the fact that they pay more for chemicals and equipment because they only buy small quantities, while the larger systems pay less because of economy of scale. Stakeholders suggested that IDNR assist systems in developing local cooperative buying agreements so that by purchasing as a group, they could qualify for a lower price. The Department has learned that the Iowa Administrative code prohibits this activity; this element is recommended for elimination in the amended strategy.

**ELEMENT 6:** Reimburse these types of activities through the operator certification training program.

- In 2002, Iowa applied for and received a \$2.48 million federal grant for operator certification training. These funds are being used to assist small water systems serving fewer than 3,300 persons with training new operators and reimbursing operators for their training and certification costs. Since there is a very close relationship between the training of water system operators and the viability of systems, the Water Supply Operations section and the Water Supply Engineering section will work together to ensure that the funds are used to enhance the certification of operators and the viability of systems.

## RECOMMENDATION 6:

### BREAK DOWN BARRIERS TO INTER- AND INTRA-DEPARTMENTAL COMMUNICATION

**REASONING:** Stakeholders recognized the lack of communication among regulatory agencies with authority over similar programs as a barrier to the increased capacity of the water systems.

**ELEMENT 1:** Increase contact with legislators and other agencies by scheduling a regular meeting with interested parties to discuss activities related to drinking water.

- The Department has not pursued this element but was encouraged by the stakeholders to keep working toward this goal. Even though individual legislators may not have an interest in meeting with the department, IDNR does attempt to provide information and education to legislators whenever it is requested.

**ELEMENT 2:** Increase communication with the Department of Public Health to discuss drinking water program responsibilities and activities.

- While IDNR has primacy for the public drinking water program, the Health Department has jurisdiction over matters such as cross-connection programs and fluoridation, both issues of interest to public water supplies. Coordination between the two agencies is needed to avoid sending a confusing message to drinking water operators. The Department has not made a concerted effort to accomplish this but significant changes in personnel at the Department of Public Health during the past few years have further complicated interagency communication, although Department staff maintain good working relationships with Health Department staff. While it may not be feasible to increase communication between IDNR and the DPH, this is still a goal of the program that should be pursued if the opportunity arises.

Another barrier identified during Advisory Group meetings was the lack of communication and coordination among divisions, bureaus, and sections of IDNR.

**ELEMENT 1:** Establish meaningful organization performance measures to increase public confidence in the Department and foster a higher sense of accountability.

- Various performance objectives have been developed by IDNR and EPA, but these may not be increasing public confidence in the department because of their general nature. Stakeholders felt that regulations such as the Consumer Confidence Report requirement, which ensures that every community public water system develops a report to let consumers know what the water was tested for and what the analytical results were each year causes alarm among consumers because of the federally prescribed language that must be used in the report. Although this requirement must be enforced by IDNR, stakeholders asked that additional language be placed on the website to provide explanation about the language used in the report to allow consumers to know the relative risks of drinking water in their community. The department may consider providing this type of information on its web page. Additionally, the newsletter will allow IDNR to discuss the types of activities being undertaken in the drinking water program and will allow consumers to learn more about how the department and certified operators in the state are working to provide them with safe and reasonably priced drinking water.

**ELEMENT 2:** IDNR management should address the issue of intra-bureau communication since the water supply section should be working closely with wastewater and water resources sections to accomplish their missions.

- The Department has taken a number of steps to promote better intra-departmental communication, such as putting all water quality-related programs under one division. Breaking communication barriers due to “compartmentalized” programs with separate funding sources, enabling legislation, etc. is difficult, but progress is being made. Water Quality Bureau supervisors meet on a weekly basis and bureau meetings for all employees are held on a quarterly basis to discuss issues within each section of the bureau. Additionally, drinking water and wastewater staff communicate on a frequent basis and have scheduled some joint training sessions for topics that involve both sections. The Department will continue to develop better cross-program communication through a variety of venues.

**ELEMENT 3:** IDNR management should address the issue of intra-agency communication since the water supply section should be working closely with underground storage tank and the geological survey bureau staff to accomplish their missions.

- As mentioned above, the Department has taken a number of steps to promote better intra-departmental communication, such as putting all environmental programs

under one division. All managers within the Environmental Services Division meet semi-annually to discuss issues of interest to the division. As decentralization of duties continues from the central office to the field offices, communication is becoming increasingly important. Field office and central office staff continue to meet three to four times per year to discuss issues and resolve policy and implementation questions. This element will continue to be a priority for the department.

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## RECOMMENDATION 7:

### DEVELOP INNOVATIVE TECHNIQUES FOR FINANCING CAPITAL IMPROVEMENT PROJECTS FOR SMALL SYSTEMS

**REASONING:** Small systems face the challenge of acquiring capital resources for improving or replacing water system infrastructure. Non-governmental systems do not have access to traditional government-sponsored capital financing programs and even the systems that can qualify for traditional funding programs may have difficulty accessing capital financing.

**ELEMENT 1:** Sponsor a meeting or a series of meetings where capital financing agencies, public finance specialists and public water system stakeholder groups discuss innovative techniques for financing small system capital improvements.

- Although IDNR has not scheduled a meeting as described, several changes were made to the Drinking Water State Revolving Fund in conjunction with the Iowa Finance Authority during the past few years to make it easier for small systems to borrow money for capital improvements. The interest rate has been held at 3 percent during this time, the allowable term was reduced from a fixed 20 year duration to allow applicants to

borrow for any number of years up to 20 years, and the minimum loan amount was reduced from \$50,000 to \$20,000. The majority of all DWSRF loans continue to be made available to small systems in the state. Additionally, IDNR has continued to meet on a monthly basis with the Iowa Department of Economic Development and the Rural Development Agency to discuss the joint funding of projects and leveraging of funds to make projects affordable for small systems. Additional changes are coming to the DWSRF in 2005 that may lower the interest rate and provide for a disadvantaged communities program, which would allow small systems at a financial disadvantage to extend their loan terms to 30 years. A planning and design loan option has also been added to allow systems to borrow funds at zero percent interest for up to three years to complete pre-project planning requirements such as engineering reports and environmental review. The department is committed to making changes to the DWSRF to ensure that it provides for the needs of small systems in need of infrastructure improvements.



## RECOMMENDATION 8:

### ACQUIRE INFORMATION ON THE PERSONNEL AND FINANCIAL RESOURCES AVAILABLE TO THE STATE'S DRINKING WATER PROGRAM

**REASONING:** The perception of the stakeholders during development of the capacity development strategy was that the personnel resources of the Department had not kept pace with the increasing responsibilities of the drinking water program. Stakeholders felt that an evaluation of program resource needs would provide them with the information they needed to support the financial and staffing resource needs of the program.

**ELEMENT 1:** Commission a third-party assessment of current and future program resource needs.

- A third-party assessment was conducted in 2002 and discussed in the previous report to the governor, but stakeholders felt that the assessment, conducted by an

EPA contractor, was not adequate information to allow them to fully support additional requests for financial support of the water supply program in the legislature and among water systems. The group felt that the department should be working with stakeholders to assess its performance and perhaps to look at what activities should receive less priority than others, and that this collaboration would provide them with more confidence in how the water supply section was operating and spending the fees that the water systems provide. The group also felt that support for the capacity development program was lacking within IDNR and that they should offer support to department management as opportunities to do so arose.



The City of Huxley used the Drinking Water State Revolving Fund (DWSRF) in 2002 to replace their treatment plant with a low-interest loan.

## SUMMARY

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The Iowa Department of Natural Resources is continuing implementation of its capacity development strategy for existing public water supplies, but the success of this program is difficult to measure. One of the major goals of the original strategy was to begin identifying systems that were in need of assistance to improve their technical, financial, and managerial capacity through a quarterly evaluation of systems that had difficulty meeting the state's drinking water regulations. This would allow staff to offer assistance to these systems and eventually reduce the number of noncompliant systems without the use of enforcement. Resource constraints have kept IDNR from implementing this portion of the strategy though other means of identifying systems that are in need of assistance are being implemented. Because of the difficulty in implementing the screening framework outlined in the original strategy, the group members agreed that the means currently being used to identify systems in need of assistance should be included in the amended strategy.

Limited resources are directed to the capacity development program in Iowa, even though several other states have adopted this program as the cornerstone of their drinking water programs. The Environmental Protection Agency has identified billions of dollars of drinking water infrastructure that will be in need of improvement within the next 20 years. With limited state and federal funds available to the water systems, it makes sense to ensure

that these systems are financially sustainable and looking to the future before the need for critical infrastructure becomes imminent. Additionally, assisting systems that are in need of technical, managerial, or financial capacity when they are willing to voluntarily make improvements can be done with fewer resources and with more protection of public health than relying on standard enforcement procedures.

The Environmental Protection Agency has suggested that the Department answer the question, "What is the efficacy of the state's capacity development program?" as part of this report. It is a difficult question to answer, but progress is being achieved, even if it is only incremental. Systems are improving their capability with the help of Drinking Water State Revolving Loans, and with the assistance of IDNR staff and technical assistance providers. Annual compliance reports, initiated in 1996, have documented improved compliance, albeit slight, with overall compliance rates remaining high despite additional rules and regulations with which the system operators and owners must contend. Nonetheless, the department recognizes the need for continued efforts in this direction, especially in the area of assisting small systems. It is hoped that the focus on water board/council member training during the next three years will show measurable benefits.

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## AVAILABILITY OF THIS REPORT

This report must be made available to the public as required by the amended Safe Drinking Water Act of 1996. It will be placed on the IDNR water supply section web page with links provided to stakeholder groups. Copies of the report will also be available from the Iowa Department of Natural Resources, Water Supply Section at 401 SW 7<sup>th</sup> Street, Suite M, Des Moines, IA 50309-4611.

# APPENDICES

## APPENDIX A

Report of Findings on Improving the Technical, Financial and  
Managerial Capacity of Iowa's Public Water Systems

Available at: [www.iowadnr.com/water/viability/files/reportfinding.pdf](http://www.iowadnr.com/water/viability/files/reportfinding.pdf)

## APPENDIX B

Iowa Administrative Code 567

Chapter 43

Available at: <http://www.legis.state.ia.us/Rules/Current/iac/567iac/56743/56743.pdf>





# REPORT OF FINDINGS

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## 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

MARCH 2000



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## EXECUTIVE SUMMARY

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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
<b>Total</b>	<b>26</b>	<b>56</b>

### 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.





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## GLOSSARY OF TERMS AND ACRONYMS USED IN THIS REPORT

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**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.

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## INTRODUCTION TO CAPACITY DEVELOPMENT: SAFE DRINKING WATER ACT (SDWA)

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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.

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## ABOUT IOWA'S DRINKING WATER SYSTEMS

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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
<b>Total</b>	<b>1,294</b>	

\*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.

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## IOWA'S VIABILITY ASSESSMENT ADVISORY GROUP

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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**, 3<sup>rd</sup> 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 &  
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**William Fink**, State Senator  
**Andrea Fogue\***, Iowa League of Cities  
**David Fox\***, Fox Engineering Associates,  
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**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  
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**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**, 5<sup>th</sup> District Congressman  
**Jim Leach**, 1<sup>st</sup> 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**, 2<sup>nd</sup> 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, 4<sup>th</sup> 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  
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**Dennis Alt**, IDNR, Supervisor  
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*Iowa Viability Strategy Facilitators*

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

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

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

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### 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

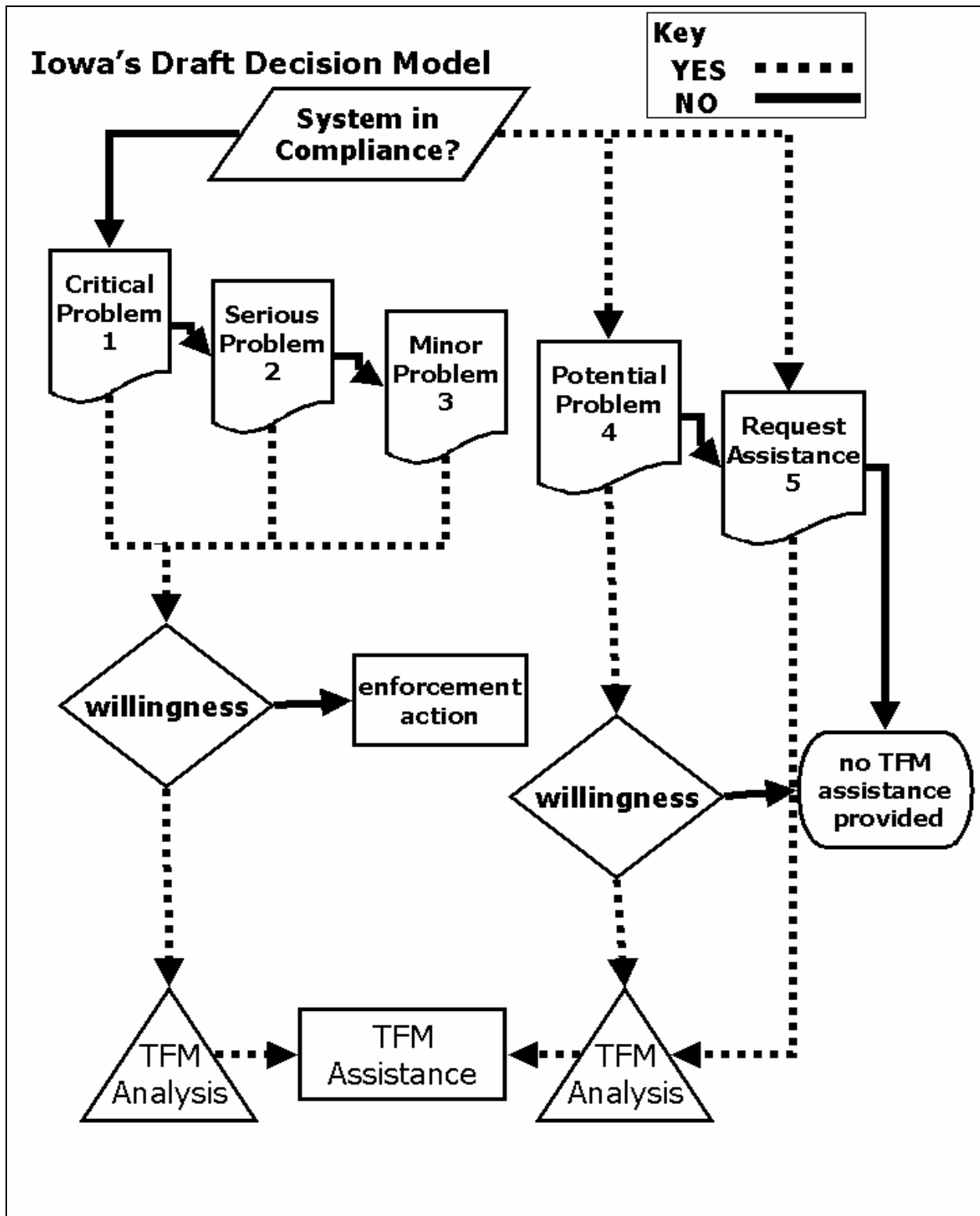


Table A2: Iowa's 1420(c)(2)(A) Criteria Definitions

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.

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## SECTION B: FACTORS THAT ENCOURAGE OR IMPAIR CAPACITY DEVELOPMENT

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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.

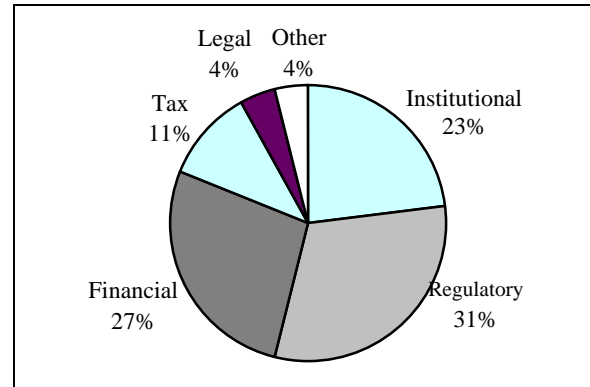
The factors operating at the Federal, State, and local level that impair or enhance water system capacity are presented in this section of the report. By definition they are:

- *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*

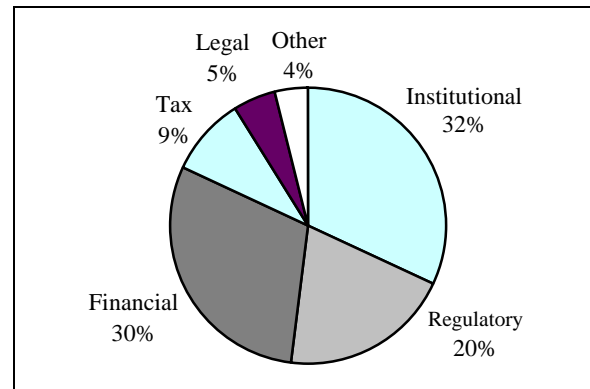
These factors were drawn from national studies, from the experience of Advisory Group members and from knowledge gained by the IDNR in administering the drinking water program over the years. The Advisory Group identified 82 factors at the Federal, State and local levels that are either enhancements 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
<b>Total</b>	<b>8</b>	<b>18</b>

### 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
<b>Total</b>	<b>13</b>	<b>24</b>

**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.
- 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.
- 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.

- 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:

- 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.
- 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
<b>Total</b>	<b>5</b>	<b>14</b>

**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.

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

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*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.



- 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, board members and city clerks 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, board or city council members and city clerks should be encouraged. Attendance at these sessions would allow operators, board/city council members and city clerks 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 and city clerks.
  - 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.
  - Small systems could develop local cooperative buying agreements to procure chemicals and equipment at more competitive rates.
  - 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.

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

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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

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

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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 all published relevant information in their newsletters. The information was 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.

A presentation was made at the IRWA Conference in September 1999. Three public meetings were held throughout the State between October and November 1999. A meeting in Western Iowa took place in early October 1999. Central Iowa was represented in late November 1999 in conjunction with the IAMU Water and Wastewater Operators' Training Workshop. A meeting in Eastern Iowa was held in mid-November 1999 in Iowa City. A joint meeting of the Iowa State Association of Counties and County Sanitarians is also being planned. Public comments were accepted through December 15, 1999.

### Response to Public Comments

Denison, IA

October 13, 1999

**No comments were received at this meeting.**

Iowa City, IA

October 26, 1999

**Comment:** The cost of chemicals and equipment is prohibitive for small systems. Has the idea of some type of cooperative buying agreement for small systems ever been considered? This way, small systems could buy chemicals or equipment at a bulk rate.

**Discussion:** The Iowa Association of Water Agencies has attempted some cooperative buying agreements for the larger water systems, but to our knowledge, this has not been tried for the smaller systems. This seems like a viable option, but the details need to be worked out. There has been some reluctance on the part of vendors to bid on these types of cooperative buying agreements, so this would need to be addressed. There may also be some legal restrictions in the Iowa Administrative Code that would need to be considered.

**Recommendation:** Add this suggestion to Recommendation 5 or 7 in Section C of the Report of Findings.

**Comment:** As a contract operator, I would like to point out that there are significant tax implications that act as impairments for people in our business

**Discussion:** During the Viability Assessment Advisory Group meetings, we discussed the tax disincentives for investor owned utilities, but disincentives for contract operators were not discussed. We are unaware of any specific tax implications or impairments with regard to contract operators.

**Recommendation:** No action.

**Comment:** This report should address how the Department coordinates with people working on the 303D efforts to improve water quality and decrease the costs of water treatment.

**Discussion:** Improving overall source water quality and thereby decreasing the costs of water treatment would improve the viability of Iowa's public water supplies. This concept is addressed in Iowa's Source Water Assessment and Protection Program, and also in the Self-Assessment for Iowa Water System Viability. One way this might be accomplished is addressed in Recommendation 6 of Section C in the Report of Findings. This recommendation focuses on improving the intra- and inter-Departmental communications and coordination. The setting of water quality standards and Total Maximum Daily Loads (TMDLs) is done by the Water Resources section of the Department, but increased communication between this section and the Water Supply section would ensure that goals of both sections were being met by these programs.

**Recommendation:** No action.

**Comment:** One recommendation I have for improving the viability of water systems would be to make a lot of the paperwork that water supplies have to fill out available in electronic form. This would save time.

**Discussion:** Making standard forms available in electronic form would be helpful to water system managers.

**Recommendation:** Add this suggestion to Recommendation 2 in Section C of the Report of Findings.

**Comment:** Cross-connection control programs are required in many of the larger towns. Why aren't they enforced in the smaller towns?

**Discussion:** Cross-connection control is enforced by the Iowa Department of Public Health. The inconsistency in enforcement of cross-connection rules was noted as an institutional impairment at the state level in the Report of Findings. This impairment was addressed with Recommendation 6 in Section C of the Report: “Increased communication with the Department of Public Health to discuss drinking water program responsibilities and activities” might help to alleviate the impairment.

**Recommendation: No action.**

**Comment:** Small system costs are rising, and it would be difficult to force them all to be taken over by contract operators. Would it be possible to have “county systems,” where the counties would be responsible for putting the wells in, setting up the billing, etc.?

**Discussion:** Although “county systems” are legally possible within Iowa, the county structures and budgets are generally not set up to handle the management of a large water system. In many cases, rural water systems are fulfilling the need for county-wide systems.

**Recommendation: No action.**

**Comment:** Has the Department considered hiring a company to collect technical, financial and managerial information for the Department’s use?

**Discussion:** The need for technical, financial and managerial information (TFM) was noted in the Report of Findings, and addressed by Recommendation 1 in Section C of the Report. Ideas such as conducting an “enhanced sanitary survey” which might contain this information, or developing a TFM scorecard to allow for comparison of viability between systems are contained within the report. Hiring an outside firm to collect this type of information is a good suggestion.

**Recommendation: Add this suggestion as an alternative to Recommendation 1 in Section C of the Report of Findings.**

**Comment:** It seems that subdivisions put wells in all over the place. It would be nice if they could centralize their systems to cut down the number of small systems in an area.

**Discussion:** This is a problem within several counties, but the Department does not have the authority to deny a construction permit for a public water supply unless it is recognized that the system, when constructed, will not be a viable system. If the counties were to put more restrictions on new subdivisions, this problem might be alleviated.

**Recommendation: No action.**

**Comment:** There seems to be a problem with the county sanitarians knowing whether wells should be permitted as public or private.

**Discussion:** County sanitarians are responsible for issuing construction permits for private wells, while the Department is responsible for issuing permits for public water supply wells. There have been problems in the past with sanitarians incorrectly identifying public wells as private wells and issuing the permits. As a result, many water supplies come onto the inventory with deficient systems because they have not been built to public water supply standards. This was listed as an impairment at the state level, and addressed by Recommendation 6 in the form of improving inter-departmental communications.

**Recommendation: No action.**

Des Moines, IA  
November 17, 1999

**Comment:** The Report mentions providing safe drinking water at a reasonable rate. Who interprets what “reasonable” means?

**Discussion:** The consumers ultimately decide what is a reasonable cost for good-quality drinking water. There is some guidance available that suggests that the cost for water should not exceed 2% of the annual median household income, but that is a rough estimate.

**Recommendation: No action.**

**Comment:** This report indicates that the Department is on the right track for providing assistance to the systems, but the red tape involved in applying for Drinking Water State Revolving Fund (DWSRF) loans seems to scare a fair number of applicants away. The communication is just not there between the EPA, the Department, and the water systems.

**Discussion:** The Department is currently looking at some changes to the DWSRF program that could reduce the paperwork, reduce loan interest rates, and generally make the program more flexible. Changing the DWSRF rules in Chapter 44 of the Iowa Administrative Code to allow loans of less than \$50,000 and terms less than 20 years are also options the Department may choose to implement to make the DWSRF loans more attractive to the smaller systems.

**Recommendation: No action.**

**Comment:** How much competition has there been for the DWSRF funds?

**Discussion:** Approximately 26 loans were accepted during the first (FY97-98) year, and 30 applications were received, with approximately 18 accepted during FY99.

**Recommendation: No action.**

**Comment:** A major problem seems to be the lack of water supply education among the city council members. (Two individuals expressed this comment.)

**Discussion:** This issue was a recurring theme throughout the Advisory Group meetings. Education of council members was addressed in Recommendations 1, 2 and 5. Specifically, the Report recommends sanitary survey results be shared with board or city council members at board/council meetings, on-site board/council member training on management issues be developed, and ICN training on peer review forums be targeted to board or city council members.

**Recommendation: No action.**

**Comment:** City clerks seem to have the most authority over financial issues, so maybe some training should be directed towards them.

**Discussion:** This seems to be true. The recommendations discussed above for council and board members should probably also be addressed to the city clerks. In addition, the use of an “enhanced” sanitary survey might help to distribute the authority over water systems among the city clerk and board or council members.

**Recommendation: Add the phrase “and city clerks” to the appropriate areas of Recommendations 1, 2, and 5 discussed in Comment 13.**

**Comment:** An additional impairment is that there is no fund for equipment depreciation in most budgets.

**Discussion:** The Advisory Group's consensus was that there is a general lack of financial knowledge among the people involved in operating public water systems. Collection of basic financial information from systems through the enhanced sanitary survey as proposed in Recommendation 1 will assist the Department in determining the steps required to improve financial viability across the state.

**Recommendation: No action.**

**Comment:** One option might be to look at the funding of depreciation for a system before a DWSRF loan is made.

**Discussion:** It is possible that the Department could require a system to set up and fund a depreciation account as a prerequisite to DWSRF loan eligibility, but this would create an additional barrier or impairment to the systems applying for funding. As part of the simple financial evaluation process discussed in Recommendation 1 of Section C, the Department could promote the voluntary creation of such accounts.

**Recommendation: No action.**

#### Written Comments

**Comment:** Many small systems need DWSRF loans of less than \$50,000 and payback terms of less than 20 years. This should be addressed. (Two individuals expressed this comment.)

**Discussion:** This comment was addressed by Recommendation 7 in the Report. The Advisory Group recommends that the Department sponsor meetings where capital financing agencies, public finance specialists and public water system stakeholder groups could discuss innovative techniques for financing small system capital improvements.

**Recommendation: No action.**

**Comment:** Management expertise would be helpful to small systems. For example, it would be nice if someone could assist several systems in an area by helping them explain their infrastructure needs to their governing bodies.

**Discussion:** This comment was addressed by Recommendations 1 and 2 in the Report of Findings. The use of an "enhanced" sanitary survey as discussed in Recommendation 1, with follow-up by a Department representative at a board or city council member, would help board/council members to understand the needs of the system from a third-party perspective. Recommendation 2 proposes on-site board/council member training to improve the management capacity of board and council members.

**Recommendation: No action.**

**Comment:** It might be helpful to small systems to utilize the technical expertise of operators from other systems.

**Discussion:** This comment was addressed by Recommendation 5 in the Report, in a proposal to encourage partnerships among systems. Ideas included the use of ICN training sessions targeted to operators, allowing the opportunity for networking before and after the sessions, and offering training in partnership issues for CEUs.

**Recommendation: No action.**

**Comment:** The Executive Summary of the Report of Findings should be sent to city council or board members.

**Discussion:** This is an excellent idea.

**Recommendation: The Department will send a copy of the Executive Summary to the owner of each public water supply in Iowa upon adoption of the report by the Environmental Protection Commission.**

**Comment:** Additional financing should be available to install or rehabilitate treatment facilities.

**Discussion:** Funding for the installation or improvement of treatment facilities is available through the DWSRF loan program, although long-term planning for capital improvements through the use of reserve funds could reduce the need for loan funds. System repair or maintenance is not eligible for DWSRF funding. Replacement of source, treatment, storage or distribution facilities that have deteriorated to the point that they require replacement, have exceeded their useful life, or no longer have sufficient capacity may be eligible for DWSRF funding. Recommendation 7 of Section C addresses these capital resource needs.

**Recommendation: No action.**

**Comment:** Financial resources are a major constraint. Qualifying for low interest loans is very important. As managers and operators, we need to be able to present avenues of financing capital improvements to our boards and councils, and to carry them out properly without additional personnel or staffing.

**Discussion:** This comment addresses both financial and managerial viability concerns. These concerns are addressed in Recommendations 1, 2 and 7 of section C of the report. The recommendations deal with making Department staff available to meet with system managers and owners and providing training and management tools for managers and owners. These recommendations also included the development of innovative financing options for small systems.

**Recommendation: No action.**

**Comment:** The use of standard accounting principles such as the “Uniform System of Accounts for Water Utilities” by the National Association of Regulatory Utility Commissioners should be required of all systems so that they are run like businesses.

**Discussion:** A requirement for uniform accounting principles would require a legislative change. Although the Advisory Group felt this would be a step in the right direction, making the legislative change and subsequently enforcing it would be a difficult task. The Self-Assessment for Iowa Water System Viability does include the question: “Do you employ standardized Generally Accepted Accounting Principles and tracking systems?” By making systems aware of the need for standardized accounting in the Self-Assessment and providing additional financial training to the managers and city clerks, it is hoped that more systems would see the benefit of these principles and begin using them. In addition, Recommendations 1 and 2 of Section C, which promote the use of enhanced sanitary surveys and the provision of on-site training to owners and managers, provide mechanisms to promote the use of standardized accounting practices.

**Recommendation: No action.**

**Comment:** Property taxes and contribution taxes for small systems that are privately owned and operated are an impairment to system viability.

**Discussion:** These impairments were addressed in the Report of Findings as tax impairments at the state level. Because of the complications involved in changing the tax code, and the limited number of small, investor owned utilities, no recommendation was made to eliminate this impairment.

**Recommendation: No action.**



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## APPENDIX A: VIABILITY ASSESMENT ADVISORY GROUP MEETING HIGHLIGHTS

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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*

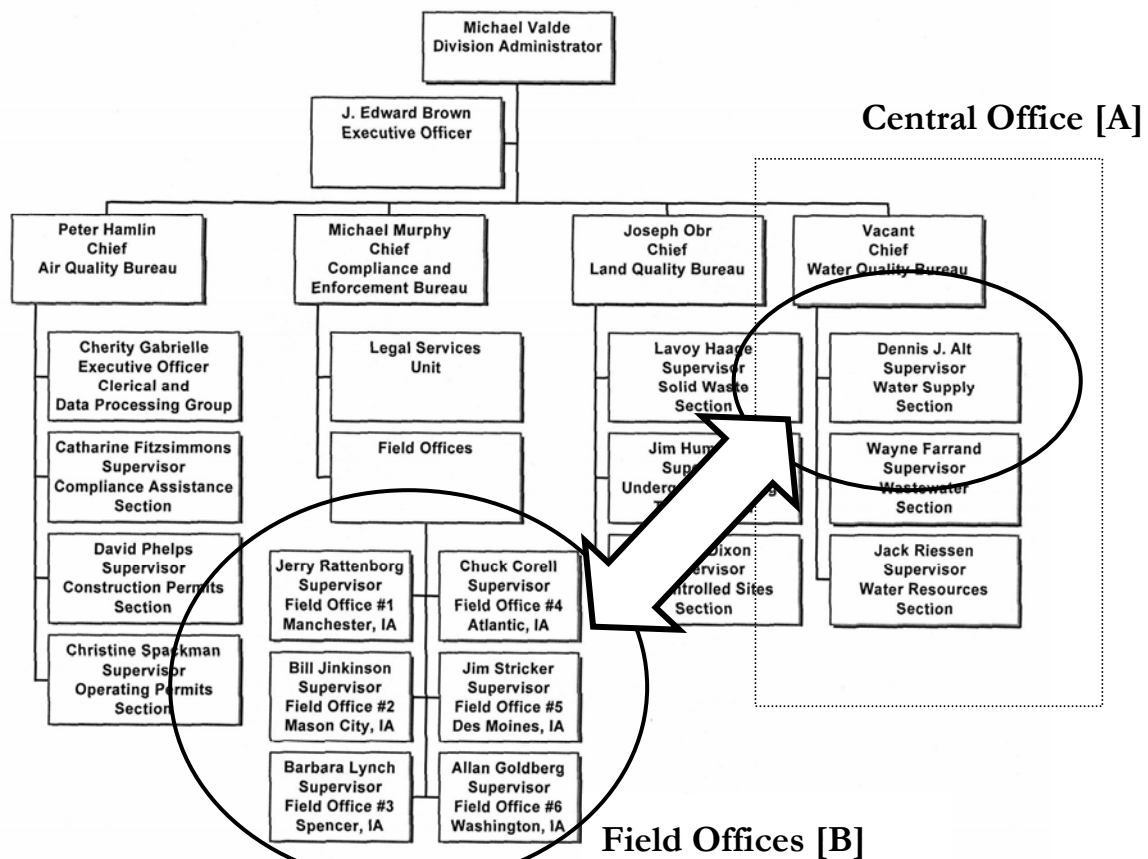
The Advisory Group continued its discussion of 1420(c)(2)(C), identifying programs that will be used to assist systems in complying with national primary drinking water regulations, encourage the development of partnerships between public water systems, and assist systems in the training and certification 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

# Capacity Development Strategy for Existing Public Water Systems



Iowa Department of Natural Resources  
Environmental Services Division  
Water Supply Engineering  
[www.iowadnr.com](http://www.iowadnr.com)

August 3, 2000

Amended August 29, 2005

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# Capacity Development Strategy for Existing Public Water Systems

## *Iowa Department of Natural Resources Drinking Water Program*

### **Introduction**

The Safe Drinking Water Act (SDWA) amendments of 1996 authorize a Drinking Water State Revolving Fund (DWSRF) loan program to help public water systems finance the infrastructure improvements needed to achieve or maintain compliance with SDWA requirements and to achieve the public health protection objectives of the Act. Section 1420(c) of the Act directs the Administrator of the U.S. Environmental Protection Agency (EPA) to withhold a portion of a state's allotment under Section 1452(G)(i) if the state fails to develop and implement a capacity development strategy to assist public water systems (PWS) in acquiring and maintaining technical, managerial, and financial capacity.

To comply with the SDWA, Iowa must develop and begin implementation of a strategy by August 6, 2000, to assist existing PWS in acquiring and maintaining capacity. Section 1420(c)(2) requires that states consider, solicit public comment on, and include as appropriate the following:

- A. The methods or criteria that the state will use to identify and prioritize the public water systems most in need of improving technical, managerial, and financial capacity;
- 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;
- C. A description of how the state will use the authorities and resources of this title or other means to assist public water systems in complying with the national primary drinking water regulations, encourage the development of partnerships between public water systems to enhance the technical, managerial, and financial capacity of the systems, and assist public water systems in the training and certification of operators;
- D. A description of 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; and



- E. An identification of the persons that have an interest in and are involved in the development and implementation of the capacity development strategy (including all appropriate agencies of federal, state, and local governments, private and nonprofit public water systems, and public water system customers).

According to the EPA document, *Guidance on Implementing the Capacity Development Provisions of the Safe Drinking Water Act Amendments of 1996*, Iowa must document the following to demonstrate that it has met the basic requirements of Section 1420(c):

- **Public Comment:** Iowa must verify that it solicited public comments on the five elements listed above as part of the preparation of its capacity development strategy. Iowa must describe relevant public comments and its responses to them.
- **Consideration of Section 1420(c)(2)(A-E):** Iowa must describe which of the listed elements (A-E) were included or excluded from its strategy, and why each element was included or excluded.
- **Capacity Development Strategy:** Iowa must describe how the selected elements together can rationally be considered to constitute a strategy to assist PWS in acquiring and maintaining technical, managerial, and financial capacity.
- **Strategy Implementation:** Iowa must describe how it will implement its strategy and evaluate its progress toward improving PWS capacity.
- **Ongoing Reporting Requirements:** Not later than two years after the date on which Iowa adopts its capacity development strategy, and every three years thereafter, the Iowa Department of Natural Resources (IDNR) must submit to the Governor a report on the efficacy of the strategy and the progress made toward improving the capacity of public water systems in the state.

Periodically, Iowa must submit to the EPA Administrator a list of community water systems and nontransient noncommunity water systems that have a history of significant noncompliance, and to the extent possible, the reason for noncompliance.

By 2001, Iowa must submit to the EPA Administrator a report on the success of enforcement mechanisms and initial capacity development efforts in helping systems in significant noncompliance achieve and maintain capacity.

This Capacity Development Strategy for Existing Public Water Systems describes how IDNR is going to assist existing water systems in acquiring and maintaining technical, managerial, and financial capacity and meet the requirements detailed in Section 1420(c) of the 1996 SDWA amendments to ensure that the state receives its full DWSRF allotment.

## Public Comment

### **Viability Assessment Advisory Group**

The Iowa Department of Natural Resources has been very proactive in involving the public and stakeholders in the strategy development process. The process began with the formation of the Viability Assessment Advisory Group, a subset of IDNR's SDWA Advisory Group. The SDWA Advisory Group consists of public water system operators, technical assistance providers, state and local agencies, financial advisors, professional organizations, technical specialists, environmental and agricultural groups, and the League of Cities. The group exists to assist IDNR in the development and implementation of SDWA rules and programs. Each member of the SDWA Advisory Group was invited to join the Viability Assessment Advisory Group prior to its first meeting. The purpose of the Viability Assessment Advisory Group was to provide public input to IDNR that would be used in development of an existing water system capacity development strategy. The group met on a monthly basis for a period of approximately ten months.

Meetings with the Viability Assessment Advisory Group were facilitated by Bill Jarocki of the Environmental Finance Center located at Boise State University in Boise, Idaho. Tasks the group accomplished included:

- The development of a decision model IDNR could use to identify and prioritize the public water systems most in need of improving technical, managerial and financial capacity;
- The development of a list of institutional, regulatory, financial, tax, legal, and other factors at the federal, state, and local level that encourage or impair capacity development;
- Comments and input on how IDNR can use the authority and resources of the SDWA and other means to help existing systems develop and improve capacity;
- Comments and input on Iowa's plan to establish a baseline and measure improvements; and
- The development of a list of interested stakeholders to be invited to join the Viability Assessment Advisory Group, along with comments and suggestions on IDNR's plan for additional public participation.

Minutes of each meeting were sent to each identified stakeholder. Products of the group's meetings, along with the list of identified stakeholders and meeting participants and minutes from each meeting are contained in the *Report of Findings On Improving the Technical, Financial and Managerial Capacity of Iowa's Public Water Systems*, finalized in March of 2000. A copy of the Report of Findings is located in Appendix A.

### **Additional Public Participation**

In an attempt to gain additional public participation, IDNR held three public meetings on the *Report of Findings* during October and November of 1999. One public meeting was held in conjunction with a professional association meeting to boost attendance. IDNR also awarded

Continuing Education Units (CEUs) to certified operators and engineers for their attendance at the public meetings.

A press release was prepared to announce the meetings and a notice was sent to each PWS in Iowa. IDNR provided several technical assistance providers with articles for their newsletters, asking for additional comments on the *Report of Findings*. The *Report of Findings* was placed on the IDNR website, and several technical assistance providers and professional associations included links on their websites to allow users to connect directly to IDNR's website.

### **Public Comments and Responses**

Public comments on the Report of Findings were accepted through December 15, 1999. Comments were received verbally, in writing, and by e-mail. The list of comments, followed by discussion and any necessary action to be taken by IDNR in response to the comments can be found in Section E of the *Report of Findings*, located in Appendix A.

### **Verification**

The *Report of Findings* discussed all five elements contained in Section 1420(c)(2)(A-E) and public comment was solicited on the entire *Report*.

### **Consideration of Section 1420(c)(2)(A-E)**

The 1996 SDWA requires that Iowa consider each of the five programmatic elements for inclusion in the capacity development strategy. In response to the Report of Findings and public meetings, Iowa has elected to include all of the elements in the strategy as described below:

#### **Element A: Methods or Criteria to Prioritize Systems**

*"In preparing the capacity development strategy, the state shall consider, solicit public comment on, and include as appropriate—the methods or criteria that the state will use to identify and prioritize the public water systems most in need of improving technical, managerial, and financial capacity."*

The Viability Assessment Advisory Group considered this element and decided that a decision model utilizing PWS compliance history provided the most accurate method of identifying and prioritizing systems in need of capacity improvement. The decision model initially separates systems by asking the question, "Is the system in compliance?" If the system is out of compliance, does it have a critical problem (acute health risk), a serious problem (chronic non-acute health risk), or a minor problem (sporadic or one-time violations)? If a system has any of these problems, and is unwilling to remedy the problem, enforcement action will be used to return the system to compliance. If the system has a problem, but is willing to work with IDNR to return to compliance, a technical, financial, and managerial analysis will be performed and assistance necessary to return the system to compliance will be provided.

If a system is currently in compliance, but realizes it has potential problems, and the system is willing to work with IDNR to remain in compliance, a technical, financial, and managerial analysis will be performed and assistance will be provided to the extent possible to keep the system in compliance. If the system has a potential problem, but is unwilling to take

precautionary measures to remain in compliance, analysis and assistance will not be provided until the system is out of compliance. The last type of system identified in the decision model is a system that is in compliance, but is voluntarily requesting assistance. A system of this type will be provided with a technical, financial, and managerial analysis and assistance will be provided to the extent possible.

The IDNR Identification and Prioritization Ranking Schematic and definitions can be found in Section A of the *Report of Findings*, located in Appendix A. This model provides a “snapshot” view of which systems are in need of capacity building assistance since compliance must be determined during each monitoring period. The model will be used to rank and prioritize the assistance needs of all systems identified as being out of compliance at the end of each calendar quarter.

**Element B: Factors that Encourage or Impair Capacity Development**

*“In preparing the capacity development strategy, the state shall consider, solicit public comment on, and include as appropriate—a description of the institutional, regulatory, financial, tax, or legal factors at the federal, state, or local level that encourage or impair capacity development.”*

The Viability Assessment Advisory Group identified 81 factors at the federal, state, or local level that either enhance or impair public water system capacity. In addition to institutional, regulatory, financial, tax or legal factors, an additional category of “other” was added to capture issues outside of the prescribed categories. The following table itemizes the factors by category:

*Table 1. Federal, State, and Local Factors that Affect Water System Capacity*

<b>Factor Type</b>	<b>Enhancements</b>	<b>Impairments</b>
Institutional	6	18
Regulatory	8	11
Financial	7	17
Tax	3	5
Legal	0	3
Other	1	2
<b>Total</b>	<b>25</b>	<b>56</b>

**FACTORS THAT ENCOURAGE CAPACITY DEVELOPMENT**

A total of 25 enhancements to capacity development were identified by the Viability Assessment Advisory Group. There were eight enhancements noted at the federal level, 12 at the state level, and five at the local level. Regulatory factors provided the greatest number of enhancements, primarily as a result of the SDWA and the commitment of EPA and IDNR to enforce nationally adopted drinking water standards. Financial factors also made up a large percentage of the enhancements since funding for the DWSRF, the DWSRF set-asides, and continued funding for state public drinking water programs is seen as a benefit to the capacity of public water systems.

Institutional factors such as the existence of EPA and IDNR and their association with national and state technical assistance providers were also seen as an encouragement to capacity development. Recent changes in the tax code that provide assistance to investor owned utilities, the tax exempt bonds available to finance municipal infrastructure projects, and exemption of state sales and property taxes for publicly owned and rural water systems were also seen as enhancements to capacity. There were no legal enhancements identified, and only one other enhancement, the cooperation of local systems with other communities and agencies, was identified by the Advisory Group.

#### **FACTORS THAT IMPAIR CAPACITY DEVELOPMENT**

A total of 56 impairments to capacity development were identified by the Viability Assessment Advisory Group. There were 18 impairments noted at the federal level, 24 at the state level, and 14 at the local level. Institutional factors such as the continual demand for additional oversight and implementation of programs, difficulty in communication between IDNR central office and field office personnel, and the number of small systems in Iowa made up the largest number of identified impairments. Institutional factors were followed closely by financial factors, including such things as the failure of Congress to appropriate full funding to the DWSRF, state auditing requirements for DWSRF recipients, and the lack of low-interest funding for small water system projects. Regulatory impairments included continuing promulgation of rules and regulations by EPA without adequate consideration of cost-benefit or the ability of states and local water systems to implement them, inconsistency of enforcement at the state level, and the lack of knowledge and resources related to regulation interpretation at the local level. Tax code limitations on private activity bonds, state sales tax on water, and heavy state taxation of investor owned utilities were included in the tax impairments. Legal factors such as the lack of land-use regulation and pending urban sprawl legislation, and other factors such as the incorrect identification of public water supplies as private supplies by county sanitarians during the construction permitting process were also included as impairments to public water system capacity.

A complete description of each factor identified by the Viability Assessment Advisory Group as an enhancement or impairment to the capacity of public water systems at the federal, state and local level can be found in Section B of the *Report of Findings*, located in Appendix A.

#### **Element C: Description of How Iowa Will Use Its Authority and Resources to Help Water Systems Improve Capacity**

*“In preparing the capacity development strategy, the state shall consider, solicit public comment on, and include as appropriate—a description of how the state will use the authorities and resources of this title or other means to—(i) assist public water systems in complying with national primary drinking water regulations; (ii) encourage the development of partnerships between public water systems to enhance the technical, managerial, and financial capacity of the systems; and (iii) assist public water systems in the training and certification of operators.”*

In developing a description of how Iowa will help existing water systems gain adequate capacity, the Viability Assessment Advisory Group analyzed the enhancements and impairments listed above and developed eight recommendations for how the resources of the state and other stakeholders could be used to help water systems improve their capacity. Ideas for

implementation were also put forward by the Advisory Group. Each of the recommendations and implementation suggestions are listed below. A check mark (✓) indicates that the suggestion or some modification of the suggestion has been selected for inclusion in the state’s capacity development strategy for existing systems. For a complete description of the strategy, see the “Capacity Development Strategy” section of this submittal.

1. The Advisory Group recommends the systematic collection of supplemental information that describes the technical, financial, and managerial conditions of public water systems and that the information should be shared with operators and management boards.

Implementation Suggestions	Chosen for Strategy
Develop and use an enhanced sanitary survey to collect technical, financial, and managerial (TFM) information	✓
IDNR representative would attend board or city council meeting to go over the survey and answer questions, encourage long-range planning	✓
Develop a TFM "scorecard" and provide to the system following survey. Score is relative but would allow for comparison between systems	✓
Collect TFM information through a contractor	

2. The Group recommends programs and methods for improving the knowledge of drinking water protection rules among operation and management personnel.

Implementation Suggestions	Chosen for Strategy
Offer CEUs for operator attendance at rules hearings or meetings	✓
Develop an automatic e-mail service to keep operators updated on rule development or modification	✓
Provide a toll-free telephone service update on rule development or modification (1-800-DNR-RULE)	
Mail an annual rules status update to all water system operators*	✓
Provide on-site board member training, focusing on long-term planning, financial management and full-cost financing	✓
Make IDNR standard forms for water supplies available in electronic form to eliminate paperwork	✓

\*Combine with implementation suggestions marked with “\*” under Recommendation 3 below

3. Communication among important stakeholders needs improvement. The Advisory Group recommends several communication mechanisms for information sharing between EPA, IDNR and the regulated water systems.

Implementation Suggestions	Chosen for Strategy
Create a periodic newsletter to be sent to each water supply by IDNR*	✓

Prepare an annual CCR-style report for water systems to include an accounting of how annual water supply fees were spent in addition to the State Annual Report*	✓
EPA should prepare an annual CCR-style report for Iowa to report on its performance in overseeing SDWA implementation	

\*Combine with implementation suggestion marked with “\*” under Recommendation 2 above

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.

Implementation Suggestions	Chosen for Strategy
Develop a public relations contest where a case prize would be given for the best public water supply marketing strategies	
Provide incentives for schools to include water treatment and supply as a curriculum topic	✓
Assess EPA environmental education grant funding for these ideas	✓

5. The Advisory Group has offered six ideas designed to improve the partnerships and networking between governmental agencies and among water systems.

Implementation Suggestions	Chosen for Strategy
Use ICN training sessions or peer review forums targeted to operators, board/city council members and city clerks	✓
Use ISU extension as a source of technical assistance for financial issues to operators and city clerks	✓
Encourage partnerships between technical assistance providers such as IAWA, AWWA, IRWA, and IAMU through joint planning meetings with IDNR	✓
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	✓
Provide CEUs for training in partnership issues	
Encourage and assist small systems in developing local cooperative buying agreements to procure chemicals and equipment at more competitive rates	✓
Reimburse these types of activities through the operator certification training program	✓

6. Inter-departmental and intra-departmental communications are essential to the efficient use of public resources to improve the technical, financial, and managerial capabilities of public water systems. The Advisory Group offers six themes for consideration by the IDNR.

Implementation Suggestions	Chosen for Strategy
Increase contact with legislators and other agencies by scheduling a regular meeting with interested parties to discuss activities related to drinking water	✓
Increase communication with Department of Public Health to discuss drinking water program responsibilities and activities	✓
Develop a description of potential linkages to look at what could be done to better serve the public through inter-agency comprehensive planning	
Establish meaningful organization performance measures to increase public confidence in the Department and foster a higher sense of accountability	✓
Move field office personnel under the supervision of the water supply supervisor, OR, at a minimum, the compliance and enforcement bureau chief should attend the regularly scheduled meetings between central office and field office staff. Additionally, meetings between the compliance and enforcement and water quality bureau chiefs should be regularly scheduled to accomplish water supply missions	
IDNR management should address the issue of intra-bureau communication since the water supply section should be working closely with wastewater and water resources sections to accomplish their missions	✓
IDNR management should address the issue of intra-agency communication since the water supply section should be working closely with underground storage tank and the geological survey bureau staff to accomplish their missions	✓

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.

Implementation Suggestions	Chosen for Strategy
Sponsor a meeting or series of meetings where capital financing agencies, public finance specialists and public water system stakeholder groups discuss innovative techniques for financing small system capital improvements	✓
Identify opportunities for innovative financing instruments to be developed, and identify institutional, legal, and financial barriers to the use of these tools	



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 technical, financial, and managerial assistance programs. The Advisory Group offers suggestions on how it could assist in this process.

Implementation Suggestions	Chosen for Strategy
Commission a third-party assessment of current and future program resource needs	✓

A full listing and description of the recommendations and sub-recommendations can be found in Section C of the *Report of Findings*, located in Appendix A.

**Element D: Establishing a Baseline and Measuring Improvements**

*“In preparing the capacity development strategy, the state shall consider, solicit public comment on, and include as appropriate—a description of 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.”*

Although three measures of improvement were developed by the Environmental Finance Center and approved by the Viability Assessment Advisory Group, IDNR felt that additional measures of success were necessary to provide a more complete picture to the Governor and EPA. As a result, the measures of success and goals in this strategy were adapted from the State of Texas’s Capacity Development Strategy Report. Since the three original measures of success listed in Section D of the Report of Findings, located in Appendix A, are contained within the measures and goals of this strategy, it was felt that the Viability Assessment Advisory Group would not have objected to their inclusion.

**ESTABLISHING A BASELINE**

IDNR currently tracks several of the measures of success listed in this section to fulfill other reporting requirements, such as the State Annual Report requirement. For these parameters, a baseline can be established. For the other measures, it will take several years of tracking before a baseline can be established. As these develop, they will be included in the report to the Governor and EPA.

**MEASURING IMPROVEMENTS**

IDNR’s capacity development program involves numerous activities that are conducted by different bureaus and sections of the agency. These activities impact various aspects of technical, managerial, and financial capacity, with some activities concentrated on one or two components of capacity, and others impacting all three. Given the multitude of activities, it would be very difficult to capture improvements with one or two measures. Also, there are

several goals for the capacity development program. It is important to determine how each of these goals is being met by the program. That type of analysis can be made by establishing potential measures for each of the goals. In addition, for the first few years of the program, improvements may take the form of several small incremental improvements in multiple areas that may not be adequately captured by a few large measures.

## **GOALS**

Outlined below are goals of the overall IDNR capacity development strategy and potential measures that can be used to determine the success of the strategy in reaching these goals. This list is not meant to imply that each and every measure will be used to measure the success. Rather, at the time the state prepares its report to the Governor and EPA to detail the success of the program, it will rely upon some or all of the measures under each goal. Additional measures may be added if they better define the success of the strategy.

### **1. Ensuring safe drinking water for all Iowans**

Measures:

- A. Total number of systems in compliance with state and federal drinking water requirements and percentage of systems this represents. These numbers may also be presented based on system classification (CWS, NTNC, TNC) and size.
- B. Percentage of population that is served by systems completely in compliance with all SDWA requirements (percentage based on total number of people served by public water systems, not total population in Iowa).
- C. Number of Significant Non-Compliance (SNC) systems in the current year compared to the number of SNC systems in the previous year. Changes in actual systems that in SNC status (i.e., are the systems the same each year or are different systems moving into SNC status?). Changes in reasons systems are moving into SNC status will be noted if the reasons are known.

### **2. Providing funding for systems in need of improvements or upgrades in treatment capability and increase the technical, financial, and managerial capacity of those receiving funding**

Measures:

- A. Loan dollars distributed to systems in need of improvements or upgrades in treatment capability
- B. Number of systems that were required to improve technical, financial, or managerial capacity due to deficiencies noted in the DWSRF process
- C. Percentage of systems that showed health and compliance issues that responded to the request for DWSRF applications

D. Of those systems required to improve technical, financial, or managerial capacity as part of the DWSRF process in previous years, the number that showed:

- No monitoring violations
- No enforcement actions
- System turned in required IDNR forms, if applicable
- Maintenance of a certified operator
- On-time payments for loan repayment

**3. Increased service from IDNR**

Measures:

- A. Number of operator certification courses offered and number of attendees
- B. Number of other training events held by IDNR and number of attendees
- C. Number of systems visited for on-site assistance
- D. Number of systems voluntarily requesting self-assessment manual
- E. Efforts for standardization of the inspection and reporting process by IDNR
- F. Number of publications requested
- G. Number of website hits
- H. Number of enhanced sanitary surveys completed

**4. Improving overall technical, financial, and managerial capacity of water systems**

Measures:

- A. Percentage of systems that have a certified operator holding the minimum required level of certification, or have a valid contract operator
- B. Percentage of systems that returned required consumer confidence report (of those systems required to return it)
- C. Percentage of systems with monitoring violations
- D. Percentage of systems with Notice of Violation letters
- E. Percentage of self-assessments returned for additional information or improvements to plan
- F. Number of systems involved in regionalization or other consolidation efforts facilitated by IDNR

- G. Number of systems seeking funding
- H. Number of systems completing a source water protection plan

**5. Improving internal interaction in the area of capacity development**

Measures:

- A. Number of meetings between the IDNR central office and the field offices each year

**Element E: Identifying Interested Persons**

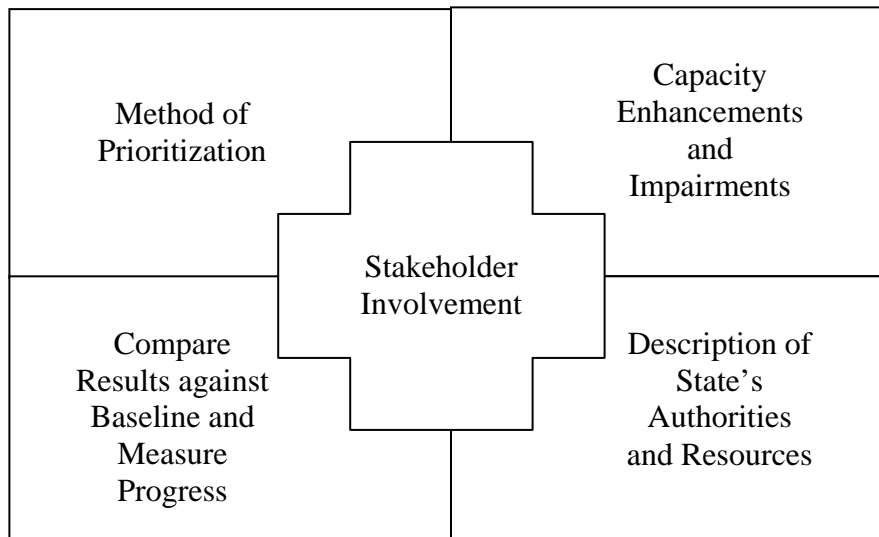
*“In preparing the capacity development strategy, the state shall consider, solicit public comment on, and include as appropriate—an identification of the persons that have an interest in and are involved in the development and implementation of the capacity development strategy (including all appropriate agencies of federal, state, and local governments, private and nonprofit public water systems, and public water system customers.”*

The last item required in developing a capacity development strategy is to identify persons interested in the strategy’s development. Although this is the last prescribed element, IDNR chose to consider this element first because of its obvious implication and use during the public participation process. During the first meeting of the Viability Assessment Advisory Group, the group identified additional stakeholders who were then invited to participate in the following advisory group meetings. Following each meeting, the meeting minutes were sent to each identified stakeholder so that they could continue to follow the process and submit comments even if they were unable to attend the group meetings. The complete list of identified stakeholders and meeting participants, along with a complete summary of public participation activities, can be found in Section E of the *Report of Findings*, located in Appendix A.

**Capacity Development Strategy**

**Elements of the Strategy**

The IDNR considered and solicited public comment on the five elements contained in 1420(c)(2)(A-E). All five elements will be integrated to form a comprehensive capacity development strategy.



## **Strategy Rationale**

The Iowa Department of Natural Resources believes that the elements chosen from those suggested during the Advisory Group's consideration of Section 1420(c)(2)(A-E), when taken as a whole, constitute a strategy to assist public water systems in acquiring and maintaining technical, managerial, and financial capacity.

The strategy includes Element A, methods and criteria for identifying and prioritizing systems in need of improving their capacity. The decision model uses compliance as a basis for identifying those systems in Iowa that are in need of technical, financial, or managerial assistance. Non-compliant systems with critical or serious problems will be asked to complete the Viability Self-Assessment Manual for Iowa Water Systems when a bilateral compliance agreement is issued to request a preliminary engineering report. Systems with minor problems will be identified through a quarterly report and required to complete the Viability Self-Assessment Manual. Systems with potential problems will be self-identified or identified by field office personnel during sanitary surveys, and will be encouraged or required (as warranted by the case) to complete the Viability Self-Assessment Manual.

In all cases the Self-Assessment Manual will be evaluated and a determination of the system's viability will be provided to the system in writing. If corrective action is necessary, IDNR may refer the system to a technical assistance provider who can provide expertise in the necessary area, or use a bilateral compliance agreement to put the system on a schedule for the corrections. Failure to complete corrective actions will result in denial of all construction permit applications and enforcement action to include the assessment of administrative penalties, and may include denial or revocation of the operating permit.

The strategy utilized Element B, the identification of factors that either enhance or impair a public water system's capacity development, to evaluate Element C, a description of how the state will use its resources and authorities to assist public water systems in compliance efforts, to assist water systems in forming partnerships to enhance their technical, managerial, and financial capacity, and to assist in the training and certification of operators. The recommendations and implementation suggestions developed during consideration of Element C were in direct response to the enhancement and impairment factors identified during consideration of Element B.

To improve the general capacity of water systems in Iowa, the Advisory Group first recommended the use of an enhanced sanitary survey to collect additional technical, financial, and managerial information from public water systems. During sanitary surveys, field office personnel have generally collected a large amount of technical information, but not much financial or managerial information. IDNR has chosen to implement this suggestion by using a more thorough sanitary survey that will include managerial and financial aspects in addition to the technical portion of the survey. This will require some additional editing of the sanitary survey guidance document currently in use by field office staff. Specific questions will be developed for their survey procedure, with points assigned to each question. If a certain score is reached, the system will be determined not viable and asked to complete a Viability Self-

Assessment Manual. Central office staff will evaluate the manual and make a final determination as to what is necessary to improve the system's capacity.

If corrective action is necessary, IDNR may refer the system to a technical assistance provider who can provide expertise in the necessary area, or use a bilateral compliance agreement to put the system on a schedule for the corrections. Failure to complete corrective actions will result in denial of all construction permit applications and enforcement action to include the assessment of administrative penalties, and may result in denial or revocation of the operation permit.

Upon request, field office personnel will attend the system's management meeting, i.e., board, council, or homeowner's association meeting, to explain the results of the sanitary survey and self-assessment evaluation. This meeting will be used to educate system managers as to the technical, financial, and managerial requirements of operating a water supply system. IDNR has decided not to use a contractor to collect technical, financial, and managerial information because the Advisory Group felt that IDNR field office staff would have the most knowledge of the system and greater credibility to explain results of the surveys they conducted.

To improve the technical capacity of operators, the Advisory Group felt that improved knowledge of rules and regulations among operators should be improved. As a result, IDNR will begin offering Continuing Education Units (CEUs) for operator attendance at rules hearings. The Department will also work toward developing an automatic e-mail service to keep operators informed of upcoming rules and modifications to existing rules. Since every system operator does not have access to a computer, a periodic mailing of rules updates to each operator will also be implemented. This idea will most likely be combined with the suggestion to create a periodic newsletter for mailing to all operators so that rule updates can be provided more frequently than the suggested annual mailing. The Department will also continue in its effort to make all forms available electronically to save time. Ideally, these forms would be available in an interactive form so that operators could complete forms and submit them electronically to eliminate paperwork and mailing costs, but IDNR currently does not possess this capability. Lastly, IDNR will make the provision of on-site board/council/management training focusing on long-term planning, financial management and full-cost financing a priority, but this training will likely be provided by a contractor through the use of the Drinking Water State Revolving Fund technical assistance set-aside. The suggestion of a toll-free telephone line available for operators to obtain rule updates was not chosen for implementation because of recent problems with other divisions' toll-free telephone numbers within the Department.

To overcome institutional and regulatory impairments at the state and federal levels, IDNR will develop a periodic newsletter for mailing to each public water system. As mentioned above, IDNR intends to incorporate this into a mailing of periodic rules updates. In response to Advisory Group concerns, an accounting of how annual water supply fees are spent during each fiscal year will be provided to technical assistance providers in the form of a news release suitable for inclusion in their respective newsletters.

To improve customer knowledge of the technical requirements for water system operation and the need for full-cost financing, IDNR will work to provide programs on drinking water treatment and supply for use in school curriculums. This will include IDNR participation in the

annual Children's Water Festival and possibly materials distributed through the IDNR educational center located in Springbrook, Iowa. The Department will assess EPA environmental education grant funding for use in these programs, as suggested by the Advisory Group. The suggestion to develop a public relations contest where a case prize would be given for the best public water supply marketing strategies was not adopted because of the difficulty in providing a cash prize through a state agency.

To improve the partnerships and networking between governmental agencies and among water systems, IDNR will continue to use the fiber optic Iowa Communications Network (ICN) for training sessions or peer review forums targeted to operators, board/city council members and city clerks since this has been used successfully in the past. The Department will also utilize the Iowa State University extension service or other technical assistance providers as a source of technical assistance for financial issues to operators and city clerks. The extension currently offers training and networking opportunities for city clerks, a group with whom IDNR has not traditionally had a formal relationship. With the new emphasis on financial capacity, IDNR will work to participate in the city clerks' meetings. To avoid duplication of technical assistance efforts and ensure that a range of assistance is provided, IDNR will encourage partnerships between technical assistance providers such as the Iowa Association of Water Agencies, the Iowa Chapter of the American Water Works Association, the Iowa Rural Water Association, the Midwest Assistance Program, and the Iowa Association of Municipal Utilities through joint planning meetings with IDNR.

The Department will encourage and assist small systems in developing local cooperative buying agreements to procure chemicals and equipment at more competitive rates, most likely with the assistance of a technical assistance provider or a large city with experience in this area. Funds from the DWSRF operator certification training set-aside will be utilized for these activities when appropriate. The Iowa Department of Natural Resources also encourages EPA to work more closely with the United States Department of Agriculture in providing funding for water system improvement projects and working on issues related to water and agriculture. The Department has decided against providing CEUs for training in partnership issues because it was felt that training in other areas would prove more valuable to the operators.

To overcome identified institutional impairments, IDNR will adopt the Advisory Group recommendation that the Department increase contact with legislators and other agencies by scheduling a regular meeting with interested parties to discuss activities related to drinking water. In addition, IDNR will attempt to increase communication with the Department of Public Health to discuss drinking water program responsibilities and activities. Through a continuing effort to put customer service first, IDNR will be going to establish meaningful organization performance measures to increase public confidence in the Department and foster a higher sense of accountability. Water supply staff will encourage IDNR management to address the issue of intra-bureau communication since the water supply section should be working closely with wastewater and water resources sections to accomplish their missions. Likewise, water supply staff will encourage IDNR management to address the issue of intra-agency communication since the water supply section should be working closely with underground storage tank and the geological survey bureau staff to accomplish their missions. The recommendation to develop a description of potential linkages to look at what could be done to better serve the public through

inter-agency comprehensive planning is being carried out, since IDNR's interim director is currently working with IDNR staff to develop a strategic plan for the agency. The suggestion to reorganize the Department so that field office personnel are under the direct supervision of the water supply section will not be implemented at this time. It is agreed that this organizational structure causes difficulties in implementing rules and policies consistently across the state, but management is not willing to reorganize the Department's structure at this time.

To address the financial impairments identified for small systems, IDNR will work to sponsor a meeting or series of meetings where capital financing agencies, public finance specialists and public water system stakeholder groups discuss innovative techniques for financing small system capital improvements. This should overcome barriers for small systems, such as the \$50,000 minimum and audit costs for DWSRF loans. Although the recommendation to identify opportunities for innovative financing instruments to be developed, and to identify institutional, legal, and financial barriers to the use of these tools was not directly selected for implementation, IDNR hopes that this can be addressed during the series of financial meetings described above. Finally, to address institutional and financial impairments at the state level, the Advisory Group suggested that IDNR commission a third-party assessment of current and future program resource needs so that appropriate financial and personnel resources to are available to design, promote and deliver technical, financial, and managerial assistance programs to public water systems. This recommendation may or may not be implemented, depending on the funds available to the water supply section and the availability of a qualified contractor. An internal assessment of program resource needs is currently underway.

The strategy includes Element D, a description of how the state will establish a baseline and measure improvements in capacity using five different goals. Each goal corresponds to different impairments and enhancements identified by the Advisory Group during their evaluation of Element B.

The strategy also includes Element E, an identification of the persons that have an interest in and are involved in the development and implementation of the capacity development strategy. The Department identified interested parties during the preliminary phase of strategy development and utilized these stakeholders in preparing the strategy. In addition, the general public was encouraged to become involved in the preparation of the strategy through public meetings and on the IDNR website.

The combination of these elements, taken as a whole, constitute the state of Iowa's strategy to assist public water systems in acquiring and maintaining technical, managerial, and financial capacity. Given available resources, IDNR has attempted to address each issue raised by the Advisory Group and the public, and on this basis we believe that this program has a rational basis and meets the criteria set in the Safe Drinking Water Act as amended in 1996 and the EPA guidance document issued in July of 1998.



## Strategy Implementation

### Current Efforts

The state is currently implementing the capacity development provisions for existing systems through the Iowa Administrative Code, subrule 43.8(5). Chapter 43 is included in Appendix B of this submittal. The rules governing existing systems in Chapter 43 were developed in conjunction with the rules for new systems and were adopted in September of 1999, prior to the finalization of the strategy for existing systems. Chapter 43 may need revision to attain consistency with the strategy for existing systems when it is finalized and approved. Chapter 43 encourages all systems to complete a viability assessment, but requires four types of systems to complete and submit a self-assessment for Department review. Systems applying for DWSRF loan funds, systems categorized as significant noncompliers, systems identified by the Department through a sanitary survey as having technical, managerial, or financial problems, and systems unable to retain a certified operator must submit a viability assessment for Department review.

The Department must review viability assessments submitted by the required systems and notify the system in writing of the assessment evaluation. If the assessment is not complete, the system will be notified in writing and given an opportunity to modify and resubmit the assessment. Voluntarily submitted assessments will be reviewed upon request and will be exempt from requirements to modify the assessment if it is not approved, or from a determination that the system is not viable, as long as the system does not meet the criteria for mandatory completion of a self-assessment.

If a system applying for a DWSRF loan is lacking in viability, the loan funds must be used to assist the system in attaining viable status. If a system making a loan application is found to be not viable and loan funds will not be sufficient or available to ensure viability, the system must provide corrective action to the Department's satisfaction prior to qualifying for loan funds.

Systems listed as significant noncompliers are not considered viable. Significant noncompliers will be required to complete the self-assessment and the most recent sanitary survey results will be used to evaluate the areas in which the system must improve to achieve capacity. Required corrective actions will be specified in the system's operation permit and will include a compliance schedule. Field office inspections will be completed on an as-needed basis to assist the system in implementing the required system improvements.

Systems experiencing technical, financial, or managerial difficulties as noted during a sanitary survey will not be considered viable. These systems must complete the viability self-assessment manual, which will be evaluated by the Department. Required corrective actions will be specified in the system's operation permit.

Systems required to retain a certified operator who are unable to do so will not be considered viable. These systems will be required to complete a viability assessment and required corrective actions will be specified in the system's operation permit.

Failure to correct deficiencies identified by the Department through the self-assessment manual may result in revocation or denial of the system's operation permit. In addition, new construction permits for water system improvements may be denied until the system makes the required corrections and attains viable status unless the proposed project is necessary to attain viability. A person or entity who disagrees with the decision regarding the viability of a public water system may request a formal review of the action within 30 days of the date of notification by the Department of the viability decision. An applicant may also appeal the decision to deny an operation or construction permit to the environmental protection commission within 30 days of receiving the notice of denial by the owner of the public water supply.

### **Future Efforts**

The implementation of the Advisory Group recommendations will begin with the use of the decision model developed in consideration of Element A. This should identify systems with technical, financial, and managerial difficulties that have not yet reached the stage of significant noncompliance.

During the first year of implementation, IDNR central and field office staff will work to add financial and managerial questions to the sanitary survey procedure so that field office staff will be able to complete the enhanced sanitary survey. Scoring procedures will also be worked out for these questions to assist field office staff in determining which systems are in need of capacity development assistance. The Department will continue to provide CEUs for operator attendance at rules hearings and will begin working on an automatic e-mail service to keep operators updated on the status of new and modified rules. Staff will begin development of a periodic newsletter that will be used to keep operators apprised of rule changes and show an annual accounting of water supply activities and fund expenditures. The Department will continue to work to make all forms available electronically and will work with technical assistance providers to look at the possibility of providing on-site board/council/management training.

The Department's water supply staff will work with the information and education bureau to access grant funding for environmental education in water supply and distribution topics. Training sessions using the Iowa Communications Network will continue to be offered when this forum is appropriate, and IDNR will encourage technical assistance providers to use this resource when scheduling training opportunities for operators. The Department will arrange for quarterly meetings with technical assistance providers to assess and coordinate training and to identify areas in which additional assistance is necessary. The Department will attempt to increase communication with the Health Department regarding water supply initiatives and program responsibilities.

Other recommendations that IDNR selected for implementation will be incorporated in the future, as resources and staff allow.

## **Ongoing Reporting Requirements**

### **Report to the State Governor**

By August 6, 2002, and every three years thereafter, IDNR will submit a report to the Governor of Iowa and to the public detailing the efficacy of the state's capacity development strategy and outlining the progress made towards improving the technical, financial, and managerial capacity of the public water systems in the state.

### **Significant Noncompliance List**

In August of 1997, IDNR prepared a list of systems in significant noncompliance to comply with the 1996 Amended SDWA. The Department will continue to work with the Region VII office in Kansas City, KS, to prepare and update the list of significant noncompliers (SNCs) on a quarterly basis. At the end of each calendar quarter, EPA sends the current SNC list to IDNR. The Department verifies the list and provides an explanation of the actions that have been taken in an effort to return the system to compliance. Continued quarterly updating of the SNC list should satisfy this reporting requirement.

### **Report to the EPA Administrator**

By August 6, 2001, IDNR will submit a report to the EPA Administrator on the success of enforcement mechanisms and initial capacity development efforts in assisting the public water systems on the SNC list in improving their technical, managerial, and financial capacity.

## **Assessing the Efficacy of the Strategy**

The Department will evaluate the performance measures developed in Element D to assess the efficacy of the capacity development strategy. Until a baseline is established, assessment of these measures may not conclusively show that the strategy is having a positive effect. Additionally, the performance measures may need to be revised if they are not effective.

The Department may reconvene the Viability Assessment Advisory Group prior to preparation of the report to the Governor's office. Stakeholder input should prove valuable in evaluating the success of the recommendations IDNR has chosen to implement and advisory group members may be able to assist IDNR in developing new recommendations or ceasing to implement program elements that are not improving systems' capacity.

## Strategy Amendment

In 2005, IDNR decided that changes were needed to more fully integrate the capacity development program into the daily duties of water supply program staff. During the development of the original strategy, many activities were selected for implementation that could not be accomplished with the limited resources the department has had access to over the past five years. Conversely, the department is implementing many activities that are not listed in the strategy but that do enhance the capacity of the existing systems in the state. As a result, the department is recommending that the strategy be amended to eliminate the activities that do not appear to be good candidates for implementation, and to add the capacity enhancing activities that were not part of the original strategy but are currently being undertaken. The findings that were identified by the Viability Assessment Advisory Group still appear to be valid, so IDNR is recommending that capacity development activities continue to be directed toward accomplishing the goals of the original strategy. The means of accomplishing the goals is the focus of this amendment.

The original strategy looked at the required elements of the amended Safe Drinking Water Act, Section 1420(c)(2)(A-E) and the recommendations of the Advisory Group as they related to these elements. The strategy included Element A, methods and criteria for identifying and prioritizing systems in need of improving their capacity, in the form of a decision model that utilized compliance as a basis for identifying those systems in Iowa that are in need of technical, financial, or managerial assistance. Because this prioritization model was never integrated into the tasks of the individuals responsible for compliance activities within DNR, a new method of prioritization that fits more closely with actual work activities is being proposed. When the new systems program was put in place in 1999, DNR management directed that rules for existing systems be put in place at the same time. Since this was prior to the development of the Viability Assessment Advisory Group, the rules that were adopted in 1999 did not reflect the Group's work, but they have been used in enforcement activities and have proven useful. As a result, it seems a logical step to use these rules in place of the prioritization scheme that was originally adopted.

### **ELEMENT A**

The rules pertaining to existing systems are in Part 567 IAC 43.8(5). They pertain to all classifications of public water systems and require submittal of a viability self assessment manual if any of the following conditions are met:

1. A system is applying for DWSRF loan funds,
2. A system is categorized as being in significant noncompliance by the department, due to a history of failure to comply with drinking water standards,
3. A system is identified by the department via a sanitary survey as having technical, financial, or managerial problems as evidenced by such conditions as poor operational control, a poor state of repair or maintenance, vulnerability to contamination, or inability to maintain adequate distribution system operating pressures,
4. A system is unable to retain a certified operator.

If any of these conditions are met, the system must submit a viability self assessment for the department's review and approval. If the department determines a system to be not viable, the department will specify necessary actions to return the system to viable status in an operating permit compliance schedule. Failure to correct identified deficiencies in accordance with a compliance schedule detailed in an operating permit may result in revocation of the system's operating permit and may also result in denial of new construction permits for water system improvements until the system takes required actions and attains viable status.

Systems applying for DWSRF funds must undergo capacity development review as required by the amended Safe Drinking Water Act and a process for conducting these reviews is in place. Additionally, the systems identified during sanitary surveys as lacking viability are required to undergo review, and several field offices have utilized this process to require corrective actions. Systems categorized as significant noncompliers (SNCs) have not systematically been required to undergo viability review, and there has been no method of tracking systems unable to retain a certified operator until very recently. Implementation of these two conditions is necessary for DNR to fully utilize its authority as outlined in the rules and to use this rule as a prioritization scheme on a continuous basis. This would more fully integrate capacity development into the drinking water program and appears to be a prioritization scheme that the department has the resources to support.

#### **ELEMENTS B AND C**

The original strategy utilized Element B, the identification of factors that either enhance or impair a public water system's capacity development, to evaluate Element C, a description of how the state will use its resources and authorities to assist public water systems in compliance efforts, to assist water systems in forming partnerships to enhance their technical, managerial, and financial capacity, and to assist in the training and certification of operators. The recommendations and implementation suggestions developed during consideration of Element C were in direct response to the enhancement and impairment factors identified during consideration of Element B. Since many of the activities proposed for Element C have not been implemented since the strategy was adopted and approved, the department is proposing to keep those activities that have been implemented or still appear to be items that can be implemented given current levels of resources, and to eliminate those activities that the department does not believe are feasible.

The original findings and activities selected for implementation are shown in the left hand column of the tables below. During the recent Advisory Group meeting, stakeholders suggested that it might be wise to focus capacity development efforts during the next few years toward an element of the strategy they felt was most important, water board/council member training. It was suggested that improving board/council member capabilities in meeting their responsibilities for effectively purveying safe drinking water could be an over-riding theme of the strategy. Suggestions for amended implementation activities are shown in the right hand columns of the table.

1. The Advisory Group recommended the systematic collection of supplemental information that describes the technical, financial, and managerial conditions of public water systems and that the information should be shared with operators and management boards.

Original Strategy Implementation Activities	Amended Strategy Implementation Activities
Develop and use an enhanced sanitary survey to collect technical, financial, and managerial (TFM) information	Retain original activity
IDNR representative would attend board or city council meeting to go over the survey and answer questions, encourage long-range planning	Retain original activity
Develop a TFM "scorecard" and provide to the system following survey. Score is relative but would allow for comparison between systems	Retain original activity, but change method of implementation. Additionally, award systems with a designation on the IDNR web page that lets the public know that they are being served high quality water if the TFM score is above a specified level.

The department has spent the last two years developing and implementing an enhanced sanitary survey for use with a Personal Digital Assistant (PDA). This standardizes the surveys that are done statewide and does include questions that address the technical, financial, and managerial aspects of operating a water system. It also requires the inspector to evaluate the viability of the water system and allows central office staff to run a report that shows which systems received a nonviable determination from an inspector. This provides central office staff with a list of systems required to perform viability self assessments and is in keeping with the proposed prioritization scheme and current rules for the program, as described previously.

IDNR field office personnel do attend board/council meetings to go over sanitary surveys and to answer questions upon request.

The department is still interested in the idea of the TFM scorecard. The original strategy proposed development of a scoring system in conjunction with sanitary surveys, but when new electronic sanitary survey was developed, this was not implemented. The Kansas Department of Health and the Environment (KDHE) has developed a brief survey that they have used successfully to establish their capacity baseline. Since many of the questions included in the Kansas survey are incorporated in the enhanced sanitary survey, answers to these questions could be pulled out in a query and a scoring system could be developed to provide each system with a TFM score. A high score on the survey would indicate a high level of capacity. Additionally, IDNR is proposing to provide some form of public recognition to communities that receive high scores, such as creating a web page listing systems with the highest score to indicate that the water supply is excellent. The department could press release this list to allow the media to publicize it and could provide the systems with a logo that they could use on their correspondence with customers to let them know that their water system is well operated. This would allow cities a high profile method of attracting new development, economic development grant funds, etc., as a reward for operating their water system in a professional manner.

Potential Measures of Performance Regarding Boards/Councils “Theme”:

- Over the course of time, measure the percentage of systems that are designated as serving high quality water each year. (Activity measure)

2. The Group recommended programs and methods for improving the knowledge of drinking water protection rules among operation and management personnel.

Original Strategy Implementation Activities	Amended Strategy Implementation Activities
Offer CEUs for operator attendance at rules hearings or meetings	Retain original activity
Develop an automatic e-mail service to keep operators updated on rule development or modification	Retain original activity
Provide a toll-free telephone service update on rule development or modification (1-800-DNR-RULE)	Recommend eliminating this activity
Mail an annual rules status update to all water system operators*	Recommend eliminating this activity
Provide on-site board member training, focusing on long-term planning, financial management and full-cost financing	Retain this activity
Make IDNR standard forms for water supplies available in electronic form to eliminate paperwork	Retain this activity

\*Combine with implementation suggestions marked with “\*” under Recommendation 3 below

Continuing Education Units (CEUs) are offered for operator attendance at rules hearings and public meetings, as outlined in the original strategy, when there is at least 50 minutes of presentation on rules. This requirement is a result of operator certification policy that requires a certain period of contact when CEUs are offered.

Development of an automatic e-mail service to update operators on rule development or modification has not been done in the past because of the difficulty in tracking operator e-mail addresses, but the new operator certification database that IDNR has put in place will allow department staff to obtain and easily modify e-mail addresses for all certified water and wastewater operators in the state. The department has discussed development of a “list serve” with the state’s Information Technology Enterprise (ITE) group and believes that this could be in place within the next three months. The list serve will allow IDNR to electronically deliver information in a timely manner to certified operators at a relatively low cost to the department. Providing information on new and modified rules is just one of the things IDNR will be able to offer once the list serve is available.

The toll free telephone service was not considered feasible because the department was not willing to fund and staff such a service. As a result, IDNR is recommending that this activity be

eliminated from the strategy. It is felt that the list serve would eliminate the need for this service for most operators, though every certified operator may not have access to e-mail. Information provided to the list serve will also be placed on the department's web page so that operators and the public have access to the information even if they do not have e-mail.

The annual mailing of rules updates to all certified operators could be replaced by e-mailing this information using the list serve, so IDNR is recommending that this activity be eliminated from the strategy. Information provided to the list serve will also be placed on the department's web page so that operators and the public have access to the information even if they do not have e-mail.

The provision of board/council member training is an ongoing goal of the capacity development program in Iowa. The department has used funds from the small systems technical assistance set aside to fund workshops that focus on technical, financial, and managerial training, and has provided the flyers for these workshops to system owners, which include board and council members. This has not been extremely successful, so IDNR is looking at other methods of reaching these system owners/managers. The Kansas Department of Health and the Environment has developed an innovative training program that they will be using to target board and council members. The program uses printed materials and DVDs that contain video clips of professionals that deal with every aspect of water system management, including insurance and legal services, certified operators, consultants, equipment sales personnel, regulators, etc. The IDNR would like to develop a similar tool for the education of Iowa water system owners and is proposing to use funds from the small systems technical assistance or administrative set asides of the Drinking Water State Revolving Fund (DWSRF) for this activity. Iowa is considering offering some financial incentive to those DWSRF applicants that provide this training to at least three board/council members through either a reduced interest rate or lower origination or service fees for loans. Workshops for board/council member training would be offered at several locations around the state to keep travel time short for attendees.

During the past five years, state government has made it a goal to provide information to the public electronically whenever possible. Many forms have been converted to electronic documents, but there remain some difficulties with accepting electronic submittals of some information. This, for example, would include Monthly Operating Reports that require the signature of a certified operator for legal reasons. As these issues are resolved and electronic submittals become more and more standard, IDNR will continue to make as many forms as possible in electronic format to eliminate paperwork.

#### Potential Measures of Performance Regarding Boards/Councils "Theme":

- Provide on-site board member training, focusing on long-term planning, financial management and full-cost financing. (Activity measure – number of training events)



3. Communication among important stakeholders needs improvement. The Advisory Group recommended several communication mechanisms for information sharing between EPA, IDNR and the regulated water systems.

Original Strategy Implementation Activities	Amended Strategy Implementation Activities
Create a periodic newsletter to be sent to each water supply by IDNR*	Retain original activity
Prepare an annual CCR-style report for water systems to include an accounting of how annual water supply fees were spent in addition to the State Annual Report*	Retain original activity, but combine with previous activity

\*Combine with implementation suggestion marked with “\*” under Recommendation 2 above

Although IDNR has always been in favor of doing a statewide newsletter, this activity has never been implemented. With the development of the list serve described above, however, the idea of the newsletter has been revived and a staff member has been assigned to this task. The department anticipates producing a newsletter on a quarterly basis and distributing it via the list serve. The first newsletter will be distributed following development of the list serve by ITE. The newsletter will include an accounting of how water supply and construction permit fees are spent each year, as described in the original strategy. The newsletter will also be placed on the IDNR web page so that the public and water system operators/owners will have access to it even if they do not have e-mail accounts.

Potential Measures of Performance Regarding Boards/Councils “Theme”:

- Offer the periodic newsletter to board/council members and attempt to determine the number of board/council members subscribing to the list serve.
4. Customer knowledge of water system performance and financing is important to the long-term success of public water facilities. The Advisory Group recommended actions that can improve customer knowledge of and involvement in the performance of their water systems.

Original Strategy Implementation Activities	Amended Strategy Implementation Activities
Provide incentives for schools to include water treatment and supply as a curriculum topic	Retain original activity, but implement by providing increased sponsorship of the Iowa Children’s Water Festival
Assess EPA environmental education grant funding for these ideas	Recommend eliminating this activity

The IDNR provides sponsorship of the Iowa Children’s Water Festival, which is an annual educational opportunity for fifth graders. An entire day is spent learning about the water cycle, water treatment, water use, conservation, and many other topics. The department is recommending increased sponsorship of this activity to accomplish this goal, possibly by providing funding for schools that have limited travel budgets that have not allowed their students to participate in the Festival. The increased sponsorship would be funded by the State Program set aside and would require a one to one match.

Potential Measures of Performance Regarding Boards/Councils “Theme”:  
*Not directly applicable to this strategy element.*

- The Advisory Group offered six ideas designed to improve the partnerships and networking between governmental agencies and among water systems.

Original Strategy Implementation Activities	Amended Strategy Implementation Activities
Use ICN training sessions or peer review forums targeted to operators, board/city council members and city clerks	Retain original activity and add webcasts
Use ISU extension as a source of technical assistance for financial issues to operators and city clerks	Possibly retain original activity and add the League of Cities
Encourage partnerships between technical assistance providers such as IAWA, AWWA, IRWA, and IAMU through joint planning meetings with IDNR	Retain original activity
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	Eliminate this activity
Encourage and assist small systems in developing local cooperative buying agreements to procure chemicals and equipment at more competitive rates	Recommend eliminating this activity
Reimburse these types of activities through the operator certification training program	Retain original activity

The department used the Iowa Communications Network (ICN) for training that was fairly successful in the late 1990s, and this was one of the reasons this activity was included in the original strategy. Since the strategy was adopted, though, IDNR has not done any training via the ICN. This does not mean, however, that this should not be retained in the strategy as a goal since it does offer a low cost means of providing training on a more local basis to operators that might not otherwise have the time to attend training at more centralized locations. The reason for this activity in the original strategy was to provide regional opportunities for operators and system owners to have a chance to network with each other and develop relationships that might prove useful to them if they needed assistance. Many training sessions have been offered on various topics around the state with funds from the small systems technical assistance set aside and the expense reimbursement grant fund. These include half-day workshops on technical, financial, and managerial issues, training for Grade A operators, consumer confidence workshops, operator certification exams, and many other topics. All of these training opportunities are held at different locations and do offer operators the chance to talk with each other, even if the training is not held via the ICN, so the goal of this activity is probably being met through an alternative means. As webcasts become more feasible and less expensive, IDNR will attempt to use that technology to accomplish this goal as well.

Although IDNR has not utilized the extension office as a source of technical assistance for operators and city clerks, primarily because of the high overhead required of contracts with the extension service, there would still be value in attempting to reach city clerks through the relationship they have with Iowa State University (ISU) extension. Additionally, IDNR would like to explore the possibility of participating in workshops held for city clerks by the League of Cities. Training on financial viability issues has been difficult to organize and as a technical organization, IDNR does not necessarily have frequent contact with the city clerks. This activity still provides an avenue for reaching this sector of the public water system management with education, and expense reimbursement grant funds could be utilized to develop and provide training to the clerks with regard to issues such as asset management and accounting standards.

The department does encourage partnership of the technical assistance providers by participating in meetings such as the joint operator certification committee meetings and the Water Alliance Meetings. Additional communication would be valuable and IDNR recommends this activity be retained and improved upon.

The possibility of cooperative buying agreements was tentatively explored following adoption of the strategy, but this activity does not appear to be feasible and may in fact be illegal. For this reason, IDNR recommends eliminating this activity from the strategy.

Expense reimbursement grant funds are being used throughout Iowa to train and assist certified operators with expenses related to training.

#### Potential Measures of Performance Regarding Boards/Councils “Theme”:

- If possible, determine the number of board/council members participating in training events over time. Investigate the possibility of working with ICN to track participation geographically.
- Survey workshop participants to help determine the characteristics of board/council members using the training events to better target training.

6. Inter-departmental and intra-departmental communications are essential to the efficient use of public resources to improve the technical, financial, and managerial capabilities of public water systems. The Advisory Group offered six themes for consideration by the IDNR.

Original Strategy Implementation Activities	Amended Strategy Implementation Activities
Increase contact with legislators and other agencies by scheduling a regular meeting with interested parties to discuss activities related to drinking water	Recommend modifying this activity
Increase communication with Department of Public Health to discuss drinking water program responsibilities and activities	Recommend eliminating this activity
Establish meaningful organization performance measures to increase public confidence in the Department and foster a higher sense of accountability	Recommend eliminating this activity or modifying
IDNR management should address the issue of intra-bureau communication since the water supply section should be working closely with wastewater and water resources sections to accomplish their missions	Retain this activity
IDNR management should address the issue of intra-agency communication since the water supply section should be working closely with underground storage tank and the geological survey bureau staff to accomplish their missions	Retain this activity

All department communications are now conducted through “legislative liaisons” assigned by the director’s office. Although it is unlikely that this activity can be implemented on the level originally intended in the strategy, IDNR recommends retaining this activity as a goal and pursuing it if the opportunity to discuss activities related to drinking water with legislators arises. The department does meet with representatives of the Rural Development Agency and the Department of Economic Development on a monthly basis to discuss drinking water issues.

With the departure of the most recent manager at the Iowa Department of Public Health (IDPH) and with the decision of the IDPH to fill this position, these duties have been delegated to various people within IDPH. Although communications with the people that do work with public drinking water at IDPH are existent, there is not an ongoing working relationship between IDNR and IDPH and it does not appear that this is feasible at this time. Although it does not appear that this impairs the drinking water program, IDNR recommends that this activity be retained as a goal. If an opportunity to increase communication with IDPH as it relates to drinking water presents itself, the department will do its part to improve this relationship.

The department has established performance measures during the past few years, but assessing the results of the measures in a way that would be meaningful to the water industry is difficult.

In general, it is difficult to measure the performance of a program that is protecting public health since there are no visible things to measure, such as waterborne disease outbreaks, when the program is working correctly. The department is committing to producing a quarterly newsletter and accomplishments of the program and an accounting of funds will be developed for distribution in this newsletter, so the goal of this activity might be accomplished in this way.

Intra-bureau communications have improved dramatically over the past five years and this activity is ongoing. Water Quality Bureau supervisors meet on a weekly basis and bureau meetings for all employees are held on a quarterly basis to discuss issues within each section of the bureau. Additionally, drinking water and wastewater staff communicate on a frequent basis and have scheduled some joint training sessions for topics that involve both sections.

Intra-agency communication has also increased since the original strategy was drafted and this activity is also ongoing. All managers within the Environmental Services Division meet semi-annually to discuss issues of interest to the division. Additionally, communication between the water supply section and the Iowa Geologic Survey has improved and the section is now supporting two employees within IGS to provide technical assistance with respect to hydrogeology and wellhead and source water protection. With the shift of central office water supply staff to the field offices, communication is improving by necessity as field office staff become responsible for issuing operating permits and enforcement responsibility—duties formerly conducted by central office staff. Central office and field office water supply staff continue to meet approximately three to four times a year to discuss water supply regulations and policy and field office supervisors and staff participate in conference calls with central office staff as issues in the field come up.

The Advisory Group suggested that additional work is necessary to increase public confidence in the department's ability to help systems in providing safe drinking water. Stakeholders felt, for example, that some of the required language that is provided to consumers in the Consumer Confidence Report is too strong and actually causes consumers to doubt the quality of their water instead of instilling confidence in the job the water utility is doing. This language is required by federal regulations, but it was suggested that IDNR place information on its web page to clarify what is included in the Consumer Confidence Report and to discuss its relative risk so that consumers have a better understanding of what public notice information is saying about their drinking water.

Additionally, the group suggested that the department work in collaboration with stakeholders to develop performance measures that are meaningful to public water systems and the public so that consumers and systems understand how their fees and tax dollars are being spent. They felt that this would be more meaningful and instill more confidence than if IDNR devised performance measures on its own.

Potential Measures of Performance Regarding Boards/Councils “Theme”:

*Not directly applicable to this strategy element.*

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.

Original Strategy Implementation Activities	Amended Strategy Implementation Activities
Sponsor a meeting or series of meetings where capital financing agencies, public finance specialists and public water system stakeholder groups discuss innovative techniques for financing small system capital improvements	Recommend modifying this activity

Although this activity has never been accomplished in the sense intended in the original strategy, IDNR has made a great effort during the past three years to make the Drinking Water State Revolving Fund more accessible to smaller borrowers. The Iowa Finance Authority has established planning and design loans to allow systems to finance engineering reports, environmental work and design work at zero percent interest for a period of three years. This will allow systems that do not have the funds to pay for this work up front to get projects initiated and ready for application for grant or loan funding. Minimum and maximum loan amounts have been removed and the department is working on a program for disadvantaged communities that will allow loan repayment to be extended to 30 years and may provide for a decreased interest rate to make projects affordable for low income communities. While the enhancement of capital financing does not have a direct relationship to the “Board/Councils Theme” of the strategy, the discovery of enhancements to capital financing could improve decisions toward creating more sustainable drinking water systems.

Potential Measures of Performance Regarding Boards/Councils “Theme”:

*Not directly applicable to this strategy element.*

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 technical, financial, and managerial assistance programs. The Advisory Group offers suggestions on how it could assist in this process.

Original Strategy Implementation Activities	Amended Strategy Implementation Activities
Commission a third-party assessment of current and future program resource needs	Recommend modifying this activity to reflect an ongoing assessment of needs

During the past few years, funding sources for the drinking water program have shifted. In the past, funding was through appropriations from the legislature and federal funding from the Environmental Protection Agency through a grant for the drinking water program. As IDNR has shifted to a Performance Partnership Grant philosophy, the agency has begun to utilize funds the water supply section traditionally relied upon to other areas of agency focus. This has forced the drinking water program to make additional use of the set asides for technical assistance provided by the field office and contractors, issuance of operating permits, and other activities. Additionally, because of the match requirements for some set aside funds, additional fees have been put in place so that the federal funds can be leveraged for use by the drinking water

program. An assessment of the section's needs was done in 2002 by Cadmus, an EPA contractor. The Cadmus evaluation showed that IDNR was doing an excellent job of enforcing current regulations with limited staff and resources. As several new regulations have been promulgated and are taking effect, however, the Cadmus resource model indicates that Iowa's drinking water program will be significantly understaffed and underfunded, and will experience increasing difficulty in implementing the recently adopted and forthcoming federal rules and programs. As this continues to occur and federal program funding shrinks, the need for assessment of program needs will continue to remain at the forefront.

As the Advisory Group suggested, though, it may be more meaningful to look at current and future resource needs in collaboration with stakeholders so that they have the information necessary to support requests for additional resources as they become necessary.

Potential Measures of Performance Regarding Boards/Councils "Theme":

*Not directly applicable to this strategy element.*

#### **ELEMENT D**

The original strategy included Element D, a detailed description of measures for the program, but it has proven difficult to track many of the listed items and establishment of a baseline has not been possible. The department is therefore recommending a different approach to monitoring the performance of this program. During the recent Advisory Group meeting, stakeholders suggested that it might be wise to focus capacity development efforts during the next few years toward the element of the strategy they felt was most important, water board/council member training. Measures of success in meeting this theme have been suggested for each of the strategy elements. Final performance measures will be developed by the capacity development program staff.

#### **ELEMENT E**

The original strategy included Element E, a description of the persons interested in and involved in the development and implementation of the strategy and the Viability Assessment Advisory Group was formed as a result. This same group was reconvened to discuss recommendations for the report to the governor in 2002, and invited to participate in the discussion of the revision of the strategy in 2005. The revised strategy will be placed on the IDNR website following input by stakeholders and any public comments that are received will receive a response from department staff.

## **SUMMARY**

The work of the Viability Assessment Advisory Group still holds true. Many of the impairments and enhancements identified during the preparation of the original strategy still hold true, but improvements have been made in several areas and work on many of the activities originally identified in the strategy is ongoing. As priorities change and the regulations of the drinking water program become more complex, additional demands will continue to be placed on the department, technical assistance providers, consultants, and drinking water systems in the state. As the primacy agency and recipient of federal funds, IDNR must continue to provide water system managers and operators with the technical, managerial, and financial expertise their work will require. The capacity development strategy should be dynamic and integrated into the drinking water program so that this goal is achieved through efficient use of resources.





