

# Capacity Development Strategy for Existing Public Water Systems



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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 (3) 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	3
IDNR representative would attend board or city council meeting to go over the survey and answer questions, encourage long-range planning	3
Develop a TFM "scorecard" and provide to the system following survey. Score is relative but would allow for comparison between systems	3
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	3
Develop an automatic e-mail service to keep operators updated on rule development or modification	3
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*	3
Provide on-site board member training, focusing on long-term planning, financial management and full-cost financing	3
Make IDNR standard forms for water supplies available in electronic form to eliminate paperwork	3

\*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
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Create a periodic newsletter to be sent to each water supply by IDNR*	3
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*	3
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

- 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	3
Assess EPA environmental education grant funding for these ideas	3

- 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	3
Use ISU extension as a source of technical assistance for financial issues to operators and city clerks	3
Encourage partnerships between technical assistance providers such as IAWA, AWWA, IRWA, and IAMU through joint planning meetings with IDNR	3
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	3
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	3
Reimburse these types of activities through the operator certification training program	3

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	3
Increase communication with Department of Public Health to discuss drinking water program responsibilities and activities	3
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	3
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	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	3

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	3
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	3

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**

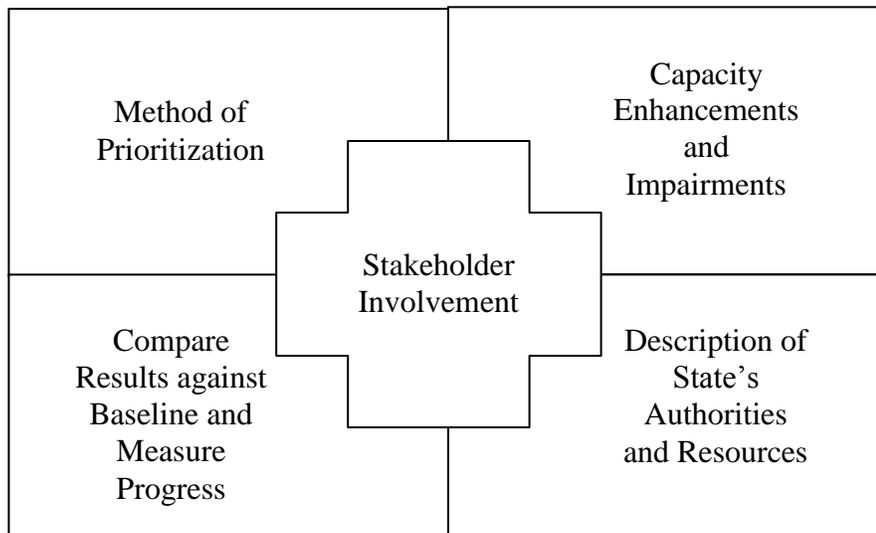
*“In preparing the capacity development strategy, the state shall consider, solicit public comment on, and include as appropriate—an identification of the persons that have an interest in and are involved in the development and implementation of the capacity development strategy (including all appropriate 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 working 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 2005

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.*

5. 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**

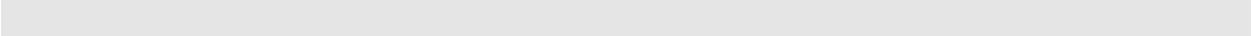
The original strategy included Element D, a detailed description of measures for the program, but it has proven difficult to track many of the listed items and establishment of a baseline has not been possible. The department is therefore recommending a different approach to monitoring the performance 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.



## Strategy Amendment 2010

In spring of 2006, the department expressed interest in joining EPA's Area Wide Optimization Program. This program is voluntary and focuses on improving public health protection by optimizing turbidity removal at surface water treatment plants. Each year the performance of each plant is evaluated and improvements in water quality are documented. Twenty-one states and four EPA regional offices currently participate in the program.

Staff from the EPA Technical Support Center (TSC) and EPA's optimization contractor, Process Applications, Inc., visited Iowa in May of 2006 to hold a kick-off meeting to assess support for the program and determine whether the optimization program would be a good fit for Iowa. The Water Quality Bureau Chief, Water Supply Engineering and Water Supply Operations Supervisors, and the Water Supply Enforcement Coordinator, along with two central office staff and one field office representative participated in a series of presentations and workshops, and ultimately determined that the optimization program would be beneficial to Iowa. Potential wins for IDNR included a means of providing water treatment training opportunities to IDNR staff and for Grade 3 and 4 operators, who for years had been complaining about the lack of advanced training opportunities. In addition, it was felt that participation in the program would provide improved water quality and public health protection without the use of enforcement tools and allow for more personalized technical assistance and better communication with system operators. The group also felt that participation in the program would improve system operators' capacity to make good decisions on their own, would legitimize new ways of thinking about process control for a new generation of operators, and would provide an avenue for learning new techniques for solving problems in the treatment and distribution systems.

The time commitment for implementing an AWOP program in Iowa was estimated at one full time equivalent (spread over several people) based on estimates provided by states already participating in the program. Although systems using surface water and influenced groundwater make up only about eight percent of the public water supplies in Iowa, these systems serve 45 percent of the population that receive their water from a public water supply. Because of the potential for impact on a large percentage of the population and the inherent risk of treating surface water, it was decided that any potential increase in public health protection justified the time commitment required for the program. Iowa officially joined the Region 6 AWOP in May of 2006.

One of the elements of the state's optimization program is a status component used to rank the surface water systems in order of relative risk. The state chose to focus primarily on turbidity to rank the systems, so that the systems with the most consistently low turbidity numbers coming out of the individual filters represent the lowest risk and the systems with the most variable and highest turbidities coming out of the filters represent the highest risk. Each year this data is collected from the monthly operating reports and entered into spreadsheets for each plant; the data from the spreadsheets is then used to populate the status component. Staff working in the AWOP program evaluate this data and determine the assistance actions that are most appropriate to the systems. This approach is identical to Element A of the items to be considered when developing a capacity development strategy.

Joining the program gave the department access to many training opportunities and tools, including Performance Based Training. Performance Based Training provides an opportunity for operators and managers of five to eight water treatment plants to go through a series of presentations and workshops that focus on optimizing the process of surface water treatment. The training provides leadership and management skills to the operators, such as data-based decision making and presentation skills in addition to technical training aspects. For the IDNR staff that work one on one as facilitators with plant personnel, the training offers a chance to visit several treatment plants in addition to obtaining advanced technical treatment experience on water plant operation. The training is an excellent networking opportunity for operators since they work together in groups at each session and have many opportunities to talk with each other over the five sessions, including visits to at least two plants during the training series. Performance Based Training is just one example of a resource that is provided through the optimization program that the state can use to assist public water systems in complying with the national drinking water regulation, to encourage partnerships between public water systems to enhance their capacity, and to assist public water systems in the training and certification of operators. This is exactly what is described in Element C of the items to be considered when developing a capacity development strategy.

One of the reasons the optimization program has been so popular among the states and EPA regions (so much so that 21 states and four EPA regions participate in the program, despite the fact that its voluntary) is because of the fact that results from participation in the program are measurable and documented. Each year IDNR develops an annual report looking at statewide turbidity numbers and the number of people served by optimized systems. This is what is described in Element D of the items to be considered when developing a capacity development strategy.

The optimization program also meets the objectives of several of the original recommendations of the Viability Assessment Advisory Group:

1. Recommendation 1 was the gathering of supplemental information that describes the technical, financial, and managerial conditions of public water systems and the sharing of that information with operators and management boards. Information on the performance of each plant is collected each year and entered into the optimization status component. This information is printed and mailed to each surface water system. In addition, questions regarding the optimization program were added to the Electronic Sanitary Survey in 2009 so that field office representatives could discuss the systems participation in the optimization program at least every three years.
2. Recommendation 2 was for programs and methods to improve the knowledge of drinking water protection rules among operation and management personnel. The optimization program definitely enhances the knowledge of operators with regard to these rules since it requires the operators and managers to go beyond the regulatory requirements for individual and combined filter effluent turbidities.
3. Recommendation 6 was to improve the partnerships and networking between governmental agencies and among water systems. Since the optimization program is voluntary and non-regulatory, the department views this program as compliance assistance, or working with the systems to try to prevent violations before they occur.

The systems get a chance to see department staff in a different light since they are working to improve the viability of the system. Working together in Performance Based Training with IDNR facilitators assigned to each plant allows the IDNR staff to develop a personal relationship with the operators so that they can be seen as a resource instead of a threat. With the program being voluntary, it gives the department a chance to be seen as helpful, and that can only enhance the drinking water program.

In summary, there is a natural fit between the optimization program and capacity development, and as a result, the department has incorporated this program into its existing systems strategy.

## **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>