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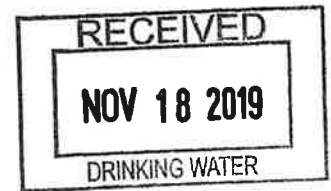
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

SEP 14 2000

COPY

Mr. Richard Nelson, Director
Nebraska Department of Health
and Human Services
P.O. Box 95007
Lincoln, Nebraska 68509-5007



Dear Mr. Nelson:

I am pleased to inform you that the Existing Systems Capacity Development Strategy submitted by the Nebraska Department of Health and Human Services (NHHS), Regulation and Licensure Department, has met the requirements of the 1996 Amendments to the Safe Drinking Water Act (SDWA). The Environmental Protection Agency (EPA), Region 7, has concluded that NHHS has met the requirements of Section 1420(c) of the SDWA, as amended, and that, pursuant to Section 1452(a)(1)(G)(i) of the Act, a 10 % withholding from the State's Drinking Water State Revolving Fund allotment is not required.

We would like to congratulate Nebraska for meeting the SDWA capacity development strategy requirements. Additionally, we appreciate the efforts of Scott Borman and the rest of the NHHS Drinking Water Program in the development of the Strategy. We support Nebraska's Strategy to assist public water systems in acquiring and maintaining technical, managerial, and financial capacity.

If you have additional questions regarding this letter, please contact the Drinking Water/Groundwater Management Branch Chief, Wolfgang Brandner, at (913) 551- 7381.

Sincerely,

U. Gale Hutton
Director
Water, Wetlands, and Pesticides Division

cc: Jack Daniel, NHHS
Richard Bay, NDEQ

stakeholders to identify the most significant and compelling issues in Nebraska, and develop programs to address them.

Public Comment

The Department held several different meetings with a variety of stakeholders during the development of their strategy. Their stakeholder group included state staff, various groups and associations which included Nebraska Rural Water Association, Nebraska League of Municipalities, the Advisory Council on Public Water Supply and the Nebraska Public Service Commission. A list of all participants can be found in the Nebraska Findings Report. The Department also placed the Report of Findings on their website, held three public meetings across the state and included it in the public meeting on the requirements of the Interim Enhanced Surface Water Treatment Rule and the Disinfection/Disinfection By-product Rule. Information and comments gathered from the stakeholders and public were incorporated into the strategy as appropriate.

Capacity Development Strategy

The Department developed a Two-Percent Technical Assistance Team which was given the responsibility to develop the criteria to prioritize systems for technical, managerial, and financial assistance. The Two-Percent Team is a partnership between the Department and the Nebraska Rural Water Association, League of Nebraska Municipalities, Nebraska Section of the American Water Works Association, Midwest Assistance Program, and the Nebraska Environmental Training Center. It is funded through the two-percent DWSRF technical assistance set-aside funds. Prioritizing will be done through an enhanced sanitary survey. The Team will begin to survey the systems which are under administrative orders, on the list of significant non-compliers, or related to a hierarchy of violation types. The survey will allow the Two-Percent Team to list those systems into three categories: Critical, Serious, and Minor. Also, additional priority will be given to those systems on the 2001 DWSRF Intended Use Plan. The Department and the Team will meet annually to further redefine or change how systems are prioritized.

Nebraska currently encourages consolidation of systems in certain instances. Future Department efforts to get public water systems to better understand drinking water capacity issues will be in the form of a public education program and campaign.

To establish a baseline, Nebraska will use the enhanced sanitary survey to look at systems under administrative orders, the list of significant non-compliers, or related to a hierarchy of violation types. The survey will provide system information that demonstrates or does not demonstrate adequate capacity. They will measure success through evaluating compliance tracking, number of violations, and the ability for systems to meet upcoming regulations.

Implementation Plan

Nebraska has been developing and implementing its capacity development strategy since early 1999 with the development of the Two-Percent Team. Over the next few years, the Department is planning to begin public information programs about drinking water, hold a series of meetings for rural communities about land use issues, implement water metering, hold meetings on innovative techniques for financing small systems, and improving the Nebraska Operator Certification program. The Department intends to evaluate its program with the input of the stakeholders every year with a special emphasis to identify and implement any improvements that can be made.

Scott Borman and the rest of the Public Drinking Water Program needs to be commended for the time and effort placed on developing the Nebraska Capacity Development Strategy for Existing Systems. We would like to take this opportunity to congratulate Nebraska for an excellent program.

If you have any questions about this memorandum, please call me at 913-551-7381, or Robert Dunlevy at 913-551-7798.

Attachment



1) ~~AA/DRH~~
2) WW PD

PWG

August 1, 2000

Mr. Dennis Grams
U.S. EPA, Region VII
901 N. 5th Street
Kansas City, KS 66101

Re: PWS – Nebraska's Capacity Development Strategy

Dear Mr. Grams:

Enclosed for your review is Nebraska's Capacity Development Strategy document.

Please feel free to contact me at 402/471-0510 if you should have any questions.

Sincerely,

Jack L. Daniel, Administrator
Environmental Health Services
Department of Health and Human Services
Regulation and Licensure

JLD/JEM

Enclosure

xc: Robert Dunlevy, U.S. EPA

**Nebraska Department of Health and Human Services
Regulation and Licensure
Environmental Health Services Section**

Capacity Development Strategy

August 6, 2000

NEBRASKA HEALTH AND HUMAN SERVICES SYSTEM



DEPARTMENT OF SERVICES • DEPARTMENT OF REGULATION AND LICENSURE • DEPARTMENT OF FINANCE AND SUPPORT

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Capacity Development Strategy for Existing Public Water Systems

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 (PWS) finance the infrastructure needed to achieve or maintain compliance with the SDWA requirements and to achieve the public health objectives of the Act. Section 1420(c) of the SDWA directs the Administrator of the United States Environmental Protection Agency (U.S. EPA) to withhold a 10% portion of a state's 2001 DWSRF allotment unless the state develops and implements a capacity development program to assist existing PWS in acquiring and maintaining technical, financial and managerial (TFM) capacity.

Under Section 1420, the State of Nebraska's Capacity Development Strategy is required to consider, solicit public comment on and address the following five requirements:

- A) The methods or criteria that the State of Nebraska will use to identify and prioritize the PWS most in need of improving TFM 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 PWS in complying with the National Primary Drinking Water Regulations (NPDWR), encourage the development of partnerships between PWS to enhance the TFM capacity of the systems and assist PWS 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 the NPDWR and state drinking water law.
- E) Identification of the persons that have an interest in and are involved in the development and implementation of the Capacity Development Strategy.

In respect to these five elements, Nebraska Department of Health and Human Services Regulation and Licensure (Department) is confident that the program elements selected and described in this document will strategically assist PWS in acquiring and maintaining TFM capacity. The Department has fashioned a strategy that exhibits the general characteristics of strategic planning, the future effect of current decisions, process, philosophy and structure.

The future effect of the current decisions made by this strategy are enhanced through programmatic decision-making (current decisions) that is ultimately geared toward improving the TFM of PWS (future effect) by working with the Capacity Development Strategy Committee Members and through other public input. The Department has examined the causes and effects of possible program changes as they may affect the acquisition and maintenance of TFM by PWS. This process has allowed the Department, after extensive review of enhancements and impairments to capacity, to better understand how program changes can influence TFM.

The strategy also meets the required characteristics of strategic planning because it is the result of a process of strategic planning. Even as the Capacity Development Strategy Committee was beginning its work, the Department had determined that the strategy would be generated through a coordinated planning effort. As a matter of course, the Department considered and adhered to the guidelines and advice of the U.S. EPA in undertaking this strategic planning effort. This process was determined in advance; and, identified what the overall planning effort would be, when it would be done, who would do it, and what would be done with the results. The strategy process does not end with the results. The strategy process does not end with the issuance of this document. Rather, this strategy is the first step in a continuous process of understanding and addressing the TFM capacity building needs of the PWS in the state.

An important shift in focus is another requisite characteristic of the strategic planning process. The Department has demonstrated through this strategy that directors, managers and staff of the Drinking Water Program believe that strategic planning is important in reaching the goals of improved TFM capacity of PWS. This strategy which forms the basis for future program direction and goals of the Department, represents a philosophical commitment to the strategic improvement of PWS and is confirmed in this document.

Finally, a strategy should formally link planning, budgeting and operations together. This allows for a systematic and formalized effort to develop detailed plans to implement objectives, policies and purposes. The strategy shows how the Department will integrate operational, budgeting and planning functions to achieve TFM goals within the organizational structure of the program.

The Department's strategy for improving TFM capabilities of PWS has looked to the future and made assumptions about the needs of TFM improvements. In addition, the Department has analyzed in detail how TFM goals might be accomplished, looked at the resources within the Department, and those of the stakeholders in meeting these goals. The Department has also established priorities in implementing TFM improvements, monitoring performance, and after measuring success and setbacks, will review the plan periodically and make necessary adjustments.

Strategy Development

The Department solicited extensive public involvement in the development of this strategy. The primary purpose of this public involvement was to bring together individuals and organizations to form a stakeholder group that would represent the broadest possible spectrum of interested parties while at the same time respecting the need to keep the committee small enough to function efficiently.

Through a series of several public meetings beginning in March of 1999, the stakeholder group developed a Report of Findings with the assists of the Environmental Finance Center at Boise State University on improving the TFM capacity of Nebraska's PWS. This Report of Findings, which includes all of the information concerning the findings of the stakeholder group in addressing the five essential requirements, is included with this strategy as Attachment A. The

Report of Findings was also made available on the Department's web page with a mechanism available to present comment through e-mail or by fax or mail. Additional public comment was also sought during a series of three public meetings across the state (Lincoln, Norfolk and North Platte). In an attempt to further increase public participation, the request for comments on the findings was combined with a public meeting on requirements of the Interim Enhanced Surface Water Treatment Rule and the Disinfection/Disinfection By-product Rule. Based on the findings of the strategy committee and from information gathered at public meetings, the outline for the strategy was developed.

Technical, Financial and Managerial Capacity Development Strategy for Existing Public Water Systems

The strategy that the Department has adopted is based on recommendations produced by the stakeholder committee and public comment and forms the basis of the strategy. All recommendations derived from this public process are incorporated into the strategy with the exception of one.

The one recommendation that was not included in the strategy was one that looked for improved communication and reporting between the Department and U.S. EPA. The Department feels that good communications between the Department and the U.S. EPA are a necessity in conducting the daily business of the program. We also feel that with the quarterly and annual reviews conducted on Nebraska's program, and the ability to contact U.S. EPA personnel as needed, is adequate to meet the intent of this finding. This recommendation refers to the State and Federal relationship and has little impact on existing water systems; and, as a consequence of this, the recommendation will not be included in the final strategy for capacity development for existing systems.

The remaining recommendations are listed in Attachment A of this strategy and the following describes how those recommendations will be used and the time frame of their incorporation into the final capacity development strategy.

Strategy for the Department

The strategy that the Department has chosen to implement based on the findings of the Capacity Development Strategy Committee Members and other public input which involves six broad areas, all designed as program or philosophical changes to further enhance the TFM capacity of Nebraska's PWS. Each of these areas is discussed below with the time frame for implementation of each element within the broader area.

Information Collection

Currently some information is routinely collected relative to the technical capabilities of a public water system through the sanitary survey format. However, because of the lack of financial and managerial capacity information on systems, the strategy committee recognized the need for collection of more TFM information by the Department. At the same time, due to shortcomings in the existing program and associated regulatory requirements of upcoming new regulations, the Department realized that the current format of sanitary surveys would need to be re-evaluated. As a result of these identified needs, an enhanced sanitary survey format has been developed and is attached to this document as Attachment B. The Department completed the development of the new sanitary survey format with additional input solicited from the Two Percent (2%) Technical Assistance Team. The 2% Technical Assistance Team are the members of the Department's 2% Technical Partnership which is funded through the 2% Technical set-aside of the DWSRF which is designed to financially assist the State in providing capacity development services. A list of the current members of the 2% Technical Assistance Team and a brief description of their current contractual duties can be found on page 32, Appendix C of Attachment A. The new Sanitary Survey is designed not only to meet the regulatory needs of the Department, but to also collect TFM information for review by the Department and the Two Percent Technical Assistance Team.

Because the sanitary survey is a regulatory document, even though enhanced to provide TFM information, only the Department staff will conduct the actual inspections. The results of the survey will then be reviewed by the Department to assign priority ranking as determined by the priority ranking protocol discussed later in this strategy. Once the priority rankings have been established, the results will be reviewed by the Department and the Two Percent Technical Assistance Team on a quarterly basis to determine which systems are most in need of TFM assistance.

Another provision of the new sanitary survey is that Department representatives and/or a Two Percent Technical Assistance Team member will be available to attend meetings, if requested by the governing body or owner of Nebraska's PWS systems to answer questions arising from the Sanitary Survey. In addition, at such meetings, staff would encourage long-term planning for the system. The offer for such meetings will be made available in a cover letter, which is sent to the head of the governing board or owner and system operator. The letter will also describe the deficiencies found during the Sanitary Survey and the procedure for corrective actions to take place.

The strategy committee also wanted to see a capacity assessment tool that could be developed and the results provided to the system. The tool that the Department will implement will be priority ranking protocol and this information will also be contained in the cover letter to the system.

The new sanitary survey format is also designed to help the Department recognize what impact TFM assistance programs are having on systems as well as what additional training needs the

systems may need. In this manner, the new format will, beginning January 1, 2001, also serve as an indicator of what changes may be needed in the strategy to meet future needs.

The new sanitary survey format, beginning January 1, 2001, will serve as the cornerstone of the entire TFM strategy. At this time all PWS will be placed on a three-year rotation for evaluation under the new format. If after the first three-year cycle a system can demonstrate that it has not critical or serious deficiencies, has not had any violations issued within the preceding three-year period, and is not in need of TFM assistance, the system may be placed on a five-year Sanitary Survey rotation.

Intergovernmental and Regulatory Functions

Two Percent Technical Partnership

The Capacity Development Strategy recommended that the Department continue its efforts to implement its Two Percent Partnership Program which is funded through the Drinking Water State Revolving Fund (DWSRF) Two Percent set-aside fund, which is designed to financially assist in giving the State the option of providing capacity development services. The Department is committed to continuing this program. A list of the current members of the Two Percent Technical Assistance Team and a brief description of their current contractual duties is shown on page 32, Appendix C of Attachment A, Report of Findings. This group will meet quarterly with the Department to review a listing of water systems in need of assistance and which partner(s) might best provide the assistance needed. The quarterly meetings will also be an opportunity for the group to report on and reflect on progress that has been made, and as the strategy develops and evolves, begin the process of redefining what the TFM needs are for the system, and what the future contractual responsibilities of the Two Percent Technical Assistance Team may be. As future needs are assessed, the defined duties will be changed to meet those needs.

With the Two Percent Technical Assistance Team members currently under contract through June 30, 2001, the actual implementation of this partnership is immediate. The partners are currently working on specific projects or with systems defined by the Department as having known compliance issues and/or capacity shortcomings. After the first quarter of 2001, the responsibilities will begin to evolve more around the TFM goals of the overall strategy.

State Public Information Programs

The strategy committee recognized that there is a strong need for a more enhanced public education program by the Department. The Department agrees with the findings and will internally and through cooperation with larger organizations such as larger PWS, peer group associations, and government organizations, begin to develop and implement an effective public education program. Because of existing staff impacts of producing an effective statewide public education effort, the official implementation of this facet of the strategy will begin in July 2001.

This will allow time for the Department to assess and prepare for such a program. The elements to be developed with include the following:

- A) A statewide educational campaign to heighten public awareness regarding the information contained in consumer confidence reports.
- B) The development and implementation of programs for public schools related to Drinking Water Week.
- C) To continue and enhance displays on the Department's activities during the Nebraska State Fair and during cooperative information programs such as the Nebraska Groundwater Foundation.
- D) The development and/or procurement of brochures, bill-stuffers, and mailers/hand-outs pertaining to pertinent current water topics geared toward small and medium size systems that may lack the financial means to do on their own.

Local Land Use Planning

The strategy committee felt that throughout Nebraska, the lack of planning in rural areas adversely affects the overall economics of producing safe drinking water. Typically this is associated with the failure of local and/or county governments to incorporate drinking water issues with land use planning and is especially relevant in developments occurring in unincorporated areas adjacent to existing municipal and not-for-profit PWS. The Department currently encourages the consolidation of existing systems in certain circumstances, and requires TFM capacity to be demonstrated by new systems prior to being approved. Future regulations will require a greater effort by the Department to act as a technical resource to help cities and counties acquire the information they need to understand drinking water capacity issues and then incorporate these issues into their planning efforts. Beginning after July 2001, the Department will lead a task force of organizations through a series of meetings throughout the state to bring these issues to the attention of local governments. The time prior to July of 2001 will be used to develop the task force with cooperation of other agencies and to define the information that will be discussed at these meetings. Extra emphasis will be placed on getting out to the rural areas that typically lack land use planning and results of these meetings will be evaluated in the Report to the Governor, the first of which is due in August of 2002.

Water Meter Requirements

The Capacity Development Strategy Committee felt that the use of measurement devices should be required in most situations for a public water system to be eligible for the DWSRF. The Department agrees with this element and has long encouraged the use of water meters for PWS. The use of meters has time after time demonstrated that they serve as an excellent conservation tool without decreasing revenues. Without accurate meter readings it is also very difficult for a system to adequately develop a long-term planning document, as required under current regulations, Tile 179 NAC 2 Section 008.02E. Because of the importance of water meters, effective with the State of Nebraska Fiscal Year 2002 Intended Use Plan Priority Funding List

for the DWSRF (July 1, 2001), the needs survey, in late 2000, early 2001 will contain questions concerning the metering capabilities of the PWS applying for the funds. That information will then be tied into the eligibility requirements of the DWSRF as set forth in the Department's priority ranking criteria. Not having meters will not preclude a PWS from receiving DWSRF funds if the public water system can meet the requirements listed below.

- 1) All new or existing wells must have a functional measurement device installed in order to be eligible for the DWSRF.
- 2) The use of functional measurement devices is required on all service connections to be eligible for the DWSRF unless the owner can demonstrate all of the following:
 - A) The installation of such devices creates an economic impairment whereby the costs of installation of such devices exceeds the potential benefits of such devices, and
 - B) All unmetered customers are very similar in the nature and quantity of their water use, and
 - C) The system has in place a comprehensive effective leak detection program and has available an enforceable water conservation plan.

A comprehensive effective leak detection program is interpreted by the Department as a program that has the entire system evaluated by individuals proficient in leak detection (commercially available or through assistance of the 2% Technical Assistance Team) a minimum of once every five years; and, provides written documentation as to the number of occurrences of leaks, the size of the leaks, and how those leaks were corrected. An enforceable conservation plan is interpreted by the Department as a local ordinance that clearly defines the following:

- A) Who has the authority to place restrictions on the PWS?
- B) What are the specific restrictions?
- C) Who has the authority to rescind restrictions?
- D) What enforcement mechanisms are used if restrictions are not followed?

Training and Technical Assistance

Financial Management Training

Small systems face an on-going challenge of obtaining capital resources for improving or replacing system infrastructure. This is especially true for non-governmental systems that do not have access to traditional government-sponsored capital financing programs such as the Community Development Block Grant through the Nebraska Department of Economic Development or the United States Department of Agriculture-Rural Development. Therefore beginning in July of 2001, the Department will take the lead by sponsoring a series of meetings throughout the state where capital financing agencies, public finance specialists, and public water system officials can discuss innovative techniques for financing small system capital improvements. The results of these meetings will be discussed in 2002 Governor's Report.

As fiscal capacity and financial capacity are two of the essential components in achieving capacity development, it is essential that small systems in Nebraska routinely review and adjust water service charges to keep pace with the full costs of operating and maintaining their water systems. Therefore, beginning after July 1, 2001, some of the contractual requirements of the Two Percent Technical Assistance Team will be changed to meet this need since they already provide technical assistance in the areas of financial management and water rate setting. The changes in the contract will reflect an enhancement of this type of assistance by being incorporated into actual training courses targeted not only at operators but also at the governing boards. It may also be possible to combine the financing seminars described above with rate-setting and financial management training so that the entire package can be presented to the target audience at one time. This possibility will be further explored over the next 10 months as this portion of the strategy is developed.

Training

A significant theme of impairments discovered by the strategy committee revolved around the need to improve the knowledge of drinking water protection rules among not only the operators of the system, but also management personnel. The Department believes that along with the enhanced sanitary survey, meeting the training needs of operators and management personnel is one of the biggest steps to a system achieving TFM capacity. The major hurdle to overcome is that often rules and regulations are produced in forms that are difficult for small system operators and managers to understand. This in turn can lead to confusion in water systems with limited managerial capabilities that have difficulty in tracking regulatory changes from proposed to final status. Therefore, the Department will implement the following changes in meeting the training needs.

- 1) Effective February 2001, the new operator training regulations under Title 179 NAC 2 Section 010, will be in place. Stakeholder meetings for this regulation will begin in August through September of 2000, and is proposing the following changes.
 - A) Reclassification of systems to more accurately reflect the level of treatment provided and populations served.
 - B) Verifiable education, work or training experience in a pre-application process for testing. Provisional licenses will no longer be granted and all operators applying to take certification exam will be required to meet the minimum requirements.
 - C) That all system personnel making water quantity or quality changes are certified to the appropriate level.
 - D) Changing the training format to a series of training modules. This allows the Department the flexibility to not only address curriculum concerns that relate to a particular type of system; but also allows for the flexibility to add new modules as the need is identified. The new format will include modules concerning technical, managerial, and financial needs as they pertain to a system's operation and maintenance practices. This training will include the Two-Percent Technical Assistance Team organizations that will use a Department approved format for the modules. The primary reason for this change is that under the current format of having a week long training and testing for certification, we are actually doing the operators a disservice. One week of training is not long enough to

cover all of the necessary operational and maintenance topics in full. Consequently, the course is tailored to cover the topics that the exam covers. Under the new format, training modules will allow for the time to cover specific topics in depth; and consequently, give the potential operators much more detailed information to use in their own system's operation and maintenance projects.

- E) Certification exams will be conducted out of central locations throughout the state (most likely field offices) at designated times. Certification exams will no longer be given during training classes because the Department feels that the current testing method being utilized does not really test prospective operators on their overall knowledge of operating principles and regulations. The operator candidates are currently being tested on only the material covered, in an at most, a 4 and one-half day course through a series of five 20-question tests which are given on the last 4 days of the training course. The new format will place the burden on the operator to feel that they are adequately prepared and trained to take the test; and, to assist the operators in this, the Department will develop a tutorial for each certification grade to help in their preparation for the exam.
 - F) As part of the Operator Certification Regulations, the U.S. EPA will reimburse the state for training unsalaried operators of systems serving populations less than 3,300.
- 2) The Monitoring and Compliance Program has already implemented a program in which information on proposed and upcoming rules is being presented to the systems and their governing boards. This program has included mailings to potentially impacted systems, site visits to council/board meetings, and group informational meetings centered on proposed impacts to systems. For operators attending these meetings, continuing education credit has been given towards operator certification renewal. This trend is expected to continue and as this program develops over the next year an upcoming regulatory status report will be developed and mailed to all system owners on an annual basis. This program will also interpret the U.S. EPA's improved health protection and risk reduction information into a more easily read and understood format for inclusion in the impact mailings of proposed rules. The section will also develop an automatic e-mail service to keep operators updated on rule development or modifications by July of 2002.
 - 3) In conjunction with the Two Percent Technical Assistance Team and in an effort to improve managerial capacity through on-site board training, a training module will be designed for board and council members. This training will focus on long-term planning, financial management, full-cost financing and regulatory environmental and financial controls. It would also be possible to develop a module for new board members that would include supplemental materials that would help them understand their role in the oversight of a public water system. This training is essential in helping the system acquire and maintain TFM capacity. However, it should be stated that any training directed specifically at boards or councils will be offered as voluntary training. The Department does not intend to require training for board members unless they are capable of making water quantity and quality changes. If this occurs, they would be required to become a certified water operator at the appropriate level. Full implementation and availability of this type of training will be by January 2002.

- 4) The Strategy Committee found that the rules and regulations (Title 179 NAC 2) are very cumbersome and written in language difficult to understand. The Department will begin surveying operators and system officials to determine which regulations are giving the system's problems. From the results of the surveys, the Department will arrange for meetings statewide to provide clarification on the regulations in question. The Department is also attempting to make the regulations easier to follow by placing individual rules and requirements in their own section of the regulations. This helps to minimize the amount of referencing back-and forth between the regulations. These efforts, when combined with the efforts of the Monitoring and Compliance Section, as described above, should allow for a much better comprehension of the rules and regulations among system operators and owners. This portion of the Strategy will be effective immediately and begin with a Regulation Survey being included in the September issue of the Water Spout, which is the HHSS-R&L Drinking Water Program monthly informational publication mailed statewide to all certified water operators.
- 5) The Committee identified a need to encourage partnerships between agencies and among systems. As discussed in earlier elements of this strategy, this will be accomplished primarily through training sessions located throughout the state. By attending the sessions, networking between operator/board members can occur and specific topics such as consolidation, mutual aid agreements, shared equipment and/or operator would be used at these meetings to encourage attendance. This type of training would be implemented during the same time frame as other Board / Council training elements in January 2002.

The Rejected Elements

The findings of the Strategy Committee were generally found to be true and the changes suggested were incorporated into this strategy. However, there was one finding not incorporated and that was the finding that there needed to be better communications between the U.S. EPA and the Department. This finding was rejected because the Department feels that with all the contact that is currently done with U.S. EPA, that good communications already exist and must be maintained for the Department to continue to function properly.

Timeline for Nebraska's Capacity Development Strategy Implementation

Ongoing and Immediate	Continuation of Two Percent Technical Assistance Team (quarterly meetings) Monitoring and Compliance Regulatory Informational Meetings and Mailings Regulation Surveys and informational meetings
January 2001	- Implementation of new sanitary survey
February 2001	- Implementation of new Operator Certification Regulations
June 2001	- Two Percent Technical Assistance Team contract renewals
July 2001	- Implementation of finance information meetings/training courses - Report to EPA Administrator on success of enforcement mechanisms and initial capacity development efforts with PWS on significant non-compliance list - Implementation of local land use planning - Enhanced public information program implemented - Water Meter requirements for DWSRF eligible PWS
January 2002	- Strategy review and changes with Strategy Committee - Board/council training implemented
July 2002	- First report to Governor on progress made towards improving TFM capacity due - Rule update automatic e-mail program implemented by Monitoring and Compliance Program
January 2003	- Strategy review and changes with Strategy Committee
July 2004	- Second report to Governor on progress made towards improving TFM capacity

Protocol for Determining Public Water Systems Most in Need of Technical, Financial and Managerial Assistance

The Two- Percent Technical Assistance Team was given the responsibility of defining the criteria, which the Department would utilize to determine which systems are most in need of TFM assistance. As stated in the strategy, most of the pertinent information to obtain the information necessary to categorize the systems will be obtained through the enhanced sanitary survey format. However, in order to establish a baseline to begin with an initial listing of systems will be developed by January 1, 2001 based on four basic requirements for which the information already exists:

- 1) An administrative order has been ordered.
- 2) Being listed on significant non-compliance list.
- 3) Acute violations.
- 4) Multiple violations.

The priority that systems are ranked with this criteria will depend on the number and severity of violations as they pose a threat to public health. This list will then be reviewed and, the Department and the Two-Percent Technical Assistance Team will determine the level of TFM assistance necessary. Additional priority will be given if a system is also listed on the 2001 DWSRF Intended Use Plan.

Once the enhanced sanitary survey format has been implemented, the list will be revised and amended based upon the TFM protocol listed below. The TFM priority list will be reviewed and up-dated on a continuous basis.

There are three specifically defined levels of needs that a system may qualify under.

- 1) Critical Category – This level indicates obvious TFM deficiencies of an immediate nature that have a potential or direct threat to public health. This includes:
 - A) No certified water operator,
 - B) No defined or structured ownership of the public water system,
 - C) Inadequate source quantity and quality,
 - D) Current infrastructure deficiencies which pose a direct threat to public health,
 - E) Issuance of an administrative order,
 - F) Multiple violations and/or placement on significant non-compliance list,
 - G) Acute violations,
 - H) Encroachment issue of a regulatory nature.
 - I) No effective and on-going Cross Connection Control Program
 - J) Missing an enforcement tool as part of the Cross-Connection Control Program

For each deficiency that meets the critical category criteria, the Department will assign a value of either 5, 7 or 10 points to that deficiency. Five points would represent a potential threat to public health and 10 points would represent an immediate and direct threat to public health. A value of

7 points would recognize a deficiency that while posing a potential threat, over time, if not corrected could lead to a direct threat to public health. In this manner, the Department is allowed flexibility in determining the point value assessments on a system to system basis, rather than trying to define broad definitions that may not impact one system while having a significant impact on another.

- 2) Serious Category - This classification is intended for those deficiencies that can be indicative of potential TFM deficiencies. However, multiples of these items can move a system up through the priority rankings that may classify the system along with the critical category systems. Serious deficiencies include the following:
 - A) No certified water operator at the appropriate level,
 - B) No Permit to Operate a PWS,
 - C) No water system budget,
 - D) No 2/10 year plan
 - E) Lack of infrastructure maintenance,
 - F) No sample site plan,
 - G) No emergency plan,
 - H) Inadequate records,
 - I) Failure to have one or more required components of a Cross-Connection Control Program (with the exception of the lack of an enforcement tool which is a critical category component.)
 - J) Failure to submit plans and specifications on retrofits and/or new construction,
 - K) Limited access to parts and equipment,
 - L) Inadequate staffing.
 - M) No Wellhead Protection Program,
 - N) No Source Water Assessment Program,
 - O) No Watershed Management Practices

Again this category is intended for systems that are showing indications that at least a portion of the system is lacking in TFM capacity. Rankings will be done based on points of either 1, 2 or 3 being assessed for each deficiency. One represents a relatively minor deficiency and a three represents a much more serious deficiency. Again, these points will be assessed on a system-by-system basis so that appropriate measures are assessed based on that system's needs only.

- 3) Minor Category - These are systems that have minimal deficiencies or have corrected the deficiencies as directed. These systems will not be offered assistance directly the by Two Percent Technical Assistance Team but still retain the ability to call and request assistance if needed.

As with the other major components of the strategy, this priority ranking system will be reviewed after being in place for a year. At that time and if needed, the Department will again meet the Two Percent Technical Assistance Team to further redefine or if necessary change how systems are being prioritized.

Measuring the Success of Nebraska's Capacity Development Strategy

The Capacity Development Strategy Committee defined several methods that the Department can utilize to measure the success of Nebraska's strategy for capacity development.

In order to accurately measure the success of Nebraska's TFM Strategy several tools will be utilized for at least the first three years of the strategy implementation. These tools listed below involve looking at the outreach and assistance efforts made by the Department and the Two-Percent Technical Assistance Team. They also establish a baseline from which the Department can evaluate their own programs and the Two-percent Technical Partnership's progress as the strategy unfolds. These tools include:

- 1) The number of sanitary surveys performed on an annual basis.
- 2) Site visits by Two-Percent Technical Assistance Team members, and evaluation of the number and types of assistance that was rendered.
- 3) Follow-up with systems via survey to solicit feedback from systems that have received assistance.
- 4) Following the type of deficiencies being found to determine how public outreach programs are working.

Another method of measuring success is by evaluating compliance tracking. This method will show the most direct results, but at the same time can be misleading. System specific compliance issues as identified under TFM prioritization categories and will be tracked as the system returns to compliance and hopefully will be maintained there. Success under this method will be difficult to measure as it will take three years to rotate through all of Nebraska' PWS. This will result in a significant number of systems coming on, or going off of the priority list at any given time. Another factor to consider is the number of upcoming regulations that can also influence the overall numbers of system in or out of compliance at any given time.

The final goal of this strategy is to not only lower the number of violations of a PWS as the strategy progresses through time, but also to provide the information necessary for Nebraska's PWS to become self-sufficient and to achieve long-term TFM Capacity. Only by doing so, will Nebraska's Public Water Systems be able to achieve, on a continuous basis, compliance with EPA's existing and future regulations. If all of the water systems in Nebraska can qualify under this statement, then the strategy has met its purpose and that is the ultimate measurement of success.

Attachment A – Report of Findings

DRAFT
REPORT OF FINDINGS

ON IMPROVING THE TECHNICAL,
FINANCIAL AND MANAGERIAL CAPACITY
OF NEBRASKA PUBLIC WATER SYSTEMS

CAPACITY DEVELOPMENT STRATEGY COMMITTEE
TO THE NEBRASKA DEPARTMENT OF HEALTH AND HUMAN SERVICES
REGULATION AND LICENSURE DRINKING WATER PROGRAM

MAY 2000

NEBRASKA HEALTH AND HUMAN SERVICES SYSTEM



DEPARTMENT OF SERVICES • DEPARTMENT OF REGULATION AND LICENSURE • DEPARTMENT OF FINANCE AND SUPPORT

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EXECUTIVE SUMMARY

During the past year, the Capacity Development Strategy Committee to the Nebraska Department of Health and Human Services Regulation and Licensure (Department) considered the challenge of improving the technical, financial and managerial (TFM) capabilities of public water systems. This *Report of Findings* presents the work of the Committee for consideration by the general public and the Department's management. Guidance for the Committee in preparing this report came generally from the federal Safe Drinking Water Act (SDWA) Amendments of 1996. At the heart of this report are the Committee's recommendations regarding the programs that the Department could strengthen or establish that would assist water systems in building capabilities to achieve compliance with the requirements of the SDWA.

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

SECTION A: IDENTIFYING WATER SYSTEMS IN NEED OF TECHNICAL, FINANCIAL AND MANAGERIAL ASSISTANCE

The first of five elements the Department must consider in developing a strategy for improving water system capacities involves identifying systems that most require assistance. The intent of the SDWA is for state drinking water programs to concentrate their efforts and resources upon water systems that can be characterized as needing improvement in one or more capacity areas: technical, financial and managerial.

The Strategy Committee examined the information sources that the Department currently uses to determine whether public water systems are in compliance with State drinking water statutes and regulations. Traditionally, this compliance information is used to inform the program staff of water systems that are not providing safe drinking water to the public on a consistent basis. This traditional information cannot fully inform state and federal regulators (and the public) about the current financial and managerial capabilities of public water systems. The committee recognizes that additional information is needed to identify water systems most in need of TFM capacity building assistance.

In addition to the information collected, retained and interpreted by the Department's Drinking Water Program staff, a wealth of information about the technical, financial and managerial aspects of water systems is formally and informally gathered and considered by a variety of non-governmental and governmental information and service providers. The Strategy Committee recognizes that value of the perspectives and collective knowledge of these entities and how they can inform the regulatory process. Many of these entities are represented through the 2% Technical Assistance Team organization described in Appendix C.

Therefore, the Strategy Committee is recommending that the Department Drinking Water Program utilize the skills, perspectives, and experiences of the 2% Partnership Team members to develop a formal protocol for determining which public water systems are most in need of TFM assistance programs. The Strategy Committee further recommends that the 2% Partnership Team work with the Department to quickly develop a two-phase approach to meeting the requirements of the SDWA Amendments.

The first phase would have the 2% Team develop criteria to prioritize and meet periodically with the Department staff to identify systems most in need of TFM assistance using all reasonably reliable formal and informal data sources that describe current water system TFM capabilities. The second phase would have the 2% Team focus on the information elements that should be routinely collected and interpreted over time to more substantively determine systems in need of assistance. The Strategy Committee believes that the 2% Team should assist the Department in the design of periodic water system survey instruments that will facilitate the gathering of information describing the technical, financial and managerial capabilities of public water systems.

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

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

The Committee identified 191 factors at the federal, state and local levels that are either enhancements or impairments to public water system TFM capacity. Enhancements and impairments were further divided into six categories: Institutional, Regulatory, Financial, Tax, Legal and Other. The largest number of impairments occurred at the local level (39). Of the local impairments, financial impairments were the most significant group (11).

Only a subset of these factors was chosen by the Committee for consideration as part of Nebraska's capacity development strategy. *These are displayed in the table below.* The subset of 112 factors are specifically noted in Section B. The remaining were retained as part of the report because it is expected that they may be revisited as experience in capacity assistance is gained. These remaining factors are noted in Appendix B.

Federal, State and Local Factors That Affect Water System Technical, Financial, and Managerial Capacity

Factors	Enhancements	Impairments
Institutional	13	18
Regulatory	12	20
Financial	14	12
Tax	3	6
Legal	2	5
Other	3	5
Total	47	66

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

In reviewing the 112 impairments and enhancements to TFM capacity of drinking water systems, the Strategy Committee discussed a number of program elements that could be enhanced or newly initiated. In total, recommendations were made for fourteen program elements in three categories. The categories can be described as informational (1 finding), intergovernmental and regulatory (7 findings), and training and technical assistance (6 findings).

Information Collection and Interpretation. The Strategy Committee recommends that the traditional measures of public drinking water system compliance be expanded to collect new information that would describe the managerial and financial capabilities of public water systems.

Intergovernmental and Regulatory. Seven program elements are offered by the Strategy Committee for public review and comment:

- Continuation and Enhancement of the 2% Technical Assistance Team
- Improved Communication and Reporting Between the Department of Regulation and Licensure and USEPA
- Public Information Programs
- Partnerships for the Development of Effective Public Education Materials
- Innovative Financing Mechanisms for Public Water Systems
- Incorporation of Drinking Water Issues in Local Land Use Planning Efforts
- Water Meter Requirements

Training and Technical Assistance. Outreach and technology transfer can be an effective mechanism for improving TFM capabilities of public water systems. The Strategy Committee recommends the following program elements;

- Improvement of Knowledge of Drinking Water Rules Among Operations and Management Personnel
- Encouragement of Partnerships Between Agencies and Among Public Water Systems
- Establishment and Enhancement of Nebraska's 2% Team for the Provision of Technical Assistance and Information to Water Systems
- Financial Management Training and Technical Assistance for Water Systems
- Development and Distribution of Training and Orientation Materials for New Public Water System Board Members
- Development and Distribution of a Handbook on Drinking Water System Statutes and Rules

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

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

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

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

GLOSSARY OF TERMS AND ACRONYMS USED IN THIS REPORT

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

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

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

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

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

CEU: Continuing Education Unit – Department approved credit for participation in education and training programs, necessary for maintaining certification as a water operator.

Department: Nebraska Department of Health and Human Services Regulation and Licensure – This agency is responsible for administering the drinking water standards in Nebraska through a primacy agreement with USEPA.

DWSRF: The Drinking Water State Revolving Loan Fund – Congress authorized this fund in 1996. The Nebraska Public Drinking Water Program and the Nebraska Department of Environmental Quality jointly administer the DWSRF.

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

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

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

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

Unfunded Mandate: Any act of the Federal government which imposes an enforceable non-voluntary duty on a state, local or tribal government; and has an annual cost in any year greater than \$50 million, or creates any new more stringent condition or restriction in a Federal program with an annual budget for state, local or tribal governments in excess of \$500 million.

USEPA: The US Environmental Protection Agency – This Federal agency oversees state programs and provides financial support. EPA determines when a state's capacity development program is in compliance with the federal Safe Drinking Water Act.

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

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

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

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

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

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

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

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

The Nebraska Capacity Development Strategy Committee chose to prepare a comprehensive *Report of Findings* that includes consideration of all SDWA-required capacity development strategy elements.

The Nebraska Capacity Development Strategy Committee, an important assembly of drinking water stakeholders, began work toward developing this *Report of Findings* in March of 1999. In addition to the Committee members listed below, other individuals and organizations were invited to participate in this work. An extensive mailing was conducted to solicit interest in serving with the Strategy Committee. The purpose was to form a stakeholder group that would represent the broadest possible spectrum of interested parties while at the same time respecting the need to keep the Committee small enough to function efficiently. Additionally, a number of individuals who were not formally appointed chose to voluntarily attend the Committee meetings and were able to contribute materially to the group's work. Provisions were made to expand the public involvement process by the following means:

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

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

Nebraska Capacity Development Strategy Committee Members

Ron Botorff, Johnson, Erickson, O'Brien & Associates, American Consulting Engineers Council of Nebraska

Greg Bouc, Village of Valpariaso

Tammy Brookhouser, Nebraska Realtors Association

Denise Brosius-Meeks, USDA – Rural Development

Roger Buhrman, Lincoln Regional Center

Bob Catton, Chair, Advisory Council on Public Water Supply

Lash Chaffin, League of Nebraska Municipalities

Joel Christensen, Metropolitan Utilities District

Bob Dunlevy, USEPA, Region VII

Dean Edson, Nebraska Association of Resources District

Tom Fuenning, Nebraska Department of Environmental Quality

Carolyn Gigstad, American Consulting Engineers Council of Nebraska

Bob Halstrom, Nebraska Bankers Association

Gene Hand, Public Service Commission

Randy Hellbusch, Nebraska Rural Water Association

Martin Huff, Nebraska Manufactured Housing Institute

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Bruce Kevil, Nebraska State Home Builders Association

Richard Koenig, Nebraska Section American Water Works Association

Marty Link, Nebraska Department of Environmental Quality

Art May, Midwest Assistance Program

Elaine Menzel, Nebraska Association of County Officials

Reed Miller, Millers & Associates, Consulting Engineers

Craig Matulka, Nebraska Rural Water Association

Jerry Obrist, Nebraska Section American Water Works Association

Lee Orton, Nebraska Well Drillers Association

Harold Otteson, League of Women Voters

Tim Rutledge, Midwest Assistance Program

Duane Schmidt, Nebraska Department of Education

Herb Scott, Nebraska Environmental Training Center

Susan Seacrest, The Groundwater Foundation

Ken Shaw, USDA – Rural Development

Jim Sheldon, Nebraska Rural Water Association

Hallie Smith, Midwest Assistance Program

Marty Stange, Hastings Utilities

Stephanie Vap, Nebraska Department of Environmental Quality

Tom Werblow, T.C. Engineering

Don Wermers, Lincoln Regional Center

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SECTION A: IDENTIFYING SYSTEMS IN NEED OF TECHNICAL, FINANCIAL, AND MANAGERIAL ASSISTANCE

Background

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

- The best and most current information (consistent and verifiable) for providing an indication of the capabilities of public water systems is the technical compliance information maintained by the Department. Limited financial and managerial capacity information is maintained by the Department. The Nebraska Public Service Commission also maintains financial and managerial information for privately-owned regulated systems.
- The Department already has well-defined mechanisms in place for dealing with acute risks to public health. Public notification, boil water advisories where appropriate, and immediate corrective actions are all undertaken when pathogenic organisms or high levels of contaminants are detected in a water supply. Consequently, the capacity development strategy will not be expected to deal with these emergency situations.
- A pattern of non-compliance will often serve as an indication that a water system lacks TFM capacity. Failures to monitor, frequent recurrences of coliform bacteria in the distribution system, variations in water quality leaving treatment facilities and other symptoms of this nature should trigger an assessment of a water system's TFM capabilities.
- An overwhelming majority of violations of the drinking water rules occur in very small drinking water systems serving fewer than 500 persons. Concern that prioritizing systems on the basis of population would result in an overall neglect of small water systems was alleviated by the knowledge that this size category would nearly always be the one chosen for assistance.
- The purpose of the prioritization scheme was not to decide which systems would or would not receive assistance, but was aimed more at determining the order in which systems would be given attention. Because the capacity development strategy will become an ongoing element of the Nebraska's Drinking Water Program, it should be possible to eventually serve all systems that truly need capacity assistance.
- There is a need to collect additional information about the water systems to determine TFM capacity in order to deliver specific assistance to meet technical, financial or managerial capacity deficiencies.
- The 2% Team is comprised of a variety of well-informed and knowledgeable stakeholders who will be able and available to provide excellent information to the Department regarding water systems most in need of assistance. The Team will also be able to advise the Department about future TFM capacity information sources and collection mechanisms.

Identification and Prioritization

The Strategy Committee examined the information sources that the Department currently uses to determine whether or not public water systems are in compliance with State drinking water protection statutes and regulations. Traditionally, this compliance information is used to inform the program staff of water systems that are not providing safe drinking water to the public on a consistent basis. This traditional information cannot fully inform State and federal regulators (and the public) about the current financial and

managerial capabilities of public water systems. The committee recognizes that additional information is needed to identify water systems most in need of TFM capacity building assistance.

In addition to the information collected, retained and interpreted by the State's Drinking Water Program staff, a wealth of information about the technical, financial and managerial health of water systems is formally and informally gathered and considered by a variety of non-governmental and governmental information and service providers. The Strategy Committee recognizes that value of the perspectives and collective knowledge of these entities and how they can inform the regulatory process. Many of these entities are represented through the 2% Technical Assistance Team described in Appendix C.

Therefore, the Strategy Committee is recommending that the Department's Drinking Water Program utilize the skills, perspectives, and experiences of the 2% team members to develop a formal protocol subject to Department approval

for determining which public water systems are most in need of TFM assistance programs. The Strategy Committee further recommends that the 2% Team work with the Department to quickly develop a two-phase approach to meeting the requirements of the SDWA Amendments.

The first phase would have the 2% Team meet periodically with the Drinking Water Program Staff to discuss and prioritize water systems most in need of TFM assistance using all reasonably reliable formal and informal data sources that describe current water system TFM capabilities. The second phase would have the 2% Team focus on the information elements that should be routinely collected and interpreted over time to more substantively determine systems in need of assistance. The Strategy Committee believes that the 2% Team should assist the Department in the design of periodic water system survey instruments that will facilitate the gathering of information describing the technical, financial and managerial capabilities of public water systems.

SECTION B: FACTORS THAT ENCOURAGE OR IMPAIR CAPACITY DEVELOPMENT

Background

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

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

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

These factors were drawn from national studies, from the experience of Committee members and from knowledge gained by the Department in administering the Drinking Water Program. The Committee identified 191 factors at the federal, state and local levels that are either enhancements or impairments to public water system TFM capacity. Of the 191 factors, 112 were selected for consideration in this report. Table B.1 itemizes these factors by major category.

Those factors that should receive special consideration in the drafting of the State's capacity development strategy are shown in Tables B5a-c. Factors that were identified but not chosen for consideration are listed in Appendix B.

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

Factors	Enhancements	Impairments
Institutional	13	18
Regulatory	12	20
Financial	14	12
Tax	3	6
Legal	2	5
Other	3	5
Total	47	66

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

A. Federal Enhancements to TFM Capacity

Institutional Enhancements:

- The 1996 Amendments to SDWA allow states to determine how their resources may be best utilized to improve public water systems. This directive is superior to the command and control approach that usually exists between USEPA and its partners at the state and local levels which are responsible for implementing federal standards.

Regulatory Enhancements:

- The stakeholder involvement requirements of the 1996 Amendments to SDWA help to ensure that a wide range of drinking water providers and the professionals that support the drinking water industry will be involved in advising the State as to the strategic approach necessary to raise the levels of capability of public water systems.

- An enhancement to the probable successful outcome of the strategic efforts to improve TFM capability is the provision of federal funding for state Drinking Water Programs on the condition that a TFM improvement strategy is established.

Financial Enhancements:

- Federal financial assistance for low income areas is provided through the state-administered Community Development Block Grant program (funded by the US Department of Housing and Urban Development); and the grant and loan program from the US Department of Agriculture's Rural Development Program; and the Nebraska Drinking Water State Revolving Fund.
- Support, through the provision of federal funding, circuit riders and other technical assistance through grass root organizations such as Nebraska Rural Water Association, Midwest Assistance Program, and Nebraska Environmental Training Center.
- Congress, in amending the SDWA, has included more direction to the USEPA for how the agency should consider recommending new drinking water contaminant monitoring regulations. Congress' attention to requiring more rigorous cost and benefit analysis of proposed contaminants is an enhancement to the regulatory process.
- The availability of financing at low interest for necessary improvements through the SDWA authorization of state DWSRFs is an enhancement to financial capacity of public water systems eligible to receive funding.
- The SDWA provision for the possible reimbursement of the expenses of water system operator certification training and education is an enhancement to technical and managerial capacity of water systems.

Tax Enhancements:

- The advisory committee suggested that an enhancement to TFM capacity would be a federal tax on bottled water. Revenues from this bottled water tax could be distributed to states for use in implementing TFM capacity improvement programs.

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

Other Enhancements:

- The emphasis of the Safe Drinking Water Act Amendments of 1996 on certification of water system operators is a de facto recognition of the relationship between the operator competence and the provision of safe drinking water. Identifying operator competence as a primary factor affecting capacity development is an enhancement to TFM capacity building efforts.

Table B2: Federal Factors That Affect Water System TFM Capacity

Factors	Enhancements	Impairments
Institutional	1	6
Regulatory	2	10
Financial	5	3
Tax	1	0
Legal	0	1
Other	1	1
Total	10	21

B. Federal Impairments to TFM Capacity

Institutional Impairments:

- The seeming lack of communication between agencies (Centers for Disease Control and Prevention, Food and Drug Administration, USEPA, etc.) that are involved in regulating the provision of safe drinking water is an institutional impairment recognized by the advisory committee.
- The perceived lack of communication among federal agencies willing to finance water system improvements is recognized as an institutional impairment.

- The committee members believe that there is also a lack of communication between the Drinking Water Program sections at the USEPA regional and headquarters levels. This lack of communication can create confusion at the State and purveyor levels.
- USEPA seems unwilling to reevaluate standards when science becomes available that demonstrates that current drinking water protection standards are not necessary or that standard levels could be decreased.
- The distrust of USEPA by local government entities is a serious impairment to the improvement of TFM capability, because general guidelines for TFM are not accepted by water purveyors due to the lack of trust.
- In states such as Nebraska where the regulated community is comprised of numerous small water systems, it appears the regulatory actions, programs and processes of USEPA are focused on larger systems.
- Unfunded mandates or “underfunded” mandates directed by the federal government continue to be a burden to most public water systems.
- The advisory committee believes that the prescriptive nature of regulations; that is, regulations that are directed more to process than outcomes, are a serious impairment to TFM capacity.
- The Congressionally imposed time frames that the USEPA and the states must work within to institute new regulations is an impairment. Often USEPA and its state partners have a difficult time meeting the congressional rulemaking standards.
- The dynamic of constant change in drinking water regulations makes it difficult for State regulators and local purveyors to devote attention to long-range horizons for water system operations.

Regulatory Impairments:

- The advisory committee recognizes that insufficient in-depth explanation of drinking water contaminants through well documented health studies is an important impairment to gaining acceptance of regulatory standards at the State and local level.
- The view of Congress and the USEPA that “one size” of regulation “fits all” systems is viewed as an impairment by the regulated community. The advisory committee believes this view is an impairment to the effective implementation of regulatory standards.
- The number of regulated contaminants in drinking water has expanded tremendously since the SDWA was passed in the 1970’s. The growing number and complexity of regulations is an impairment in so much as this complexity in the regulations requires higher capacities of managerial and technical competence, which is especially expensive and difficult to maintain at the small system level.
- While USEPA has established working groups for regulatory development, even so, the regulatory process seems to have limited small system input.
- An impairment to the successful implementation of national standards for drinking water is that it is difficult for local purveyors and (in many cases) the part-time boards of directors of those systems to understand the rules writing process.
- Generally, the advisory committee recognizes that federal standards that result in rules and regulations are usually hard to understand and the need for such standards is poorly communicated.

Financial Impairments:

- The cost of monitoring and treatment for contaminants instituted through federal actions is a significant financial impairment for smaller systems.
- The ability of the USEPA to withhold DWSRF capitalization funds if the Department does not adopt certain regulations hurts the water systems, in effect.

- In certain federal assistance programs, a local match is required for access to federal funds. The requirement of matching funds for some projects is an impairment to the improvement of TFM capacity of public water systems.

Tax Impairments: None identified for inclusion in Report of Findings.

Legal Impairments:

- The resolution of disputes between the USEPA and water purveyors, usually associated with the lack of compliance by water systems, has a differential effect depending upon the size of the system. Small systems usually bear the full brunt of federal enforcement action and have less managerial capacity to resolve the disputes. Larger systems can use their managerial resources (and legal capacity) to delay final resolution of compliance disputes through legal maneuvers.

Other Impairments:

- Because the State receives federal financial support for the regulation of public water systems in part based on the number of systems supervised; when the State consolidates systems to improve TFM capability it receives less money from USEPA for the program; thus is being punished for accomplishing that goal.

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

A. *State Enhancements to TFM Capacity*

Institutional Enhancements:

- Drinking water system capacity is related to the skills of the State regulatory agency that oversees the protection of public drinking water. The Department Drinking Water Program has a well-trained staff and the capability of meeting a variety of needs of water systems and water system stakeholders. This is an important institutional enhancement found at the state government level.

- The State of Nebraska has required certification and continuing education of water system operators. The operator certification program provides venues to educate operators on good system management and it leads to discussions with management on infrastructure improvement needs.

- The State of Nebraska provides direct help to water systems with information, education and technical assistance programs by supporting organizations such as the Nebraska Rural Water Association, Midwest Assistance Program, Nebraska Section American Water Works Association, League of Nebraska Municipalities, Nebraska Environmental Training Center, county extension services, local health departments, Natural Resources Districts, Nebraska Groundwater Foundation, Nebraska Well Drillers Association, American Consulting Engineers Council, and public power districts (load management).

- The State laboratory is part of the Regulation & Licensure agency. This institutional proximity enhances the State's institutional capacity to oversee water systems and to improve TFM capacity.

- The State's modest ability to custom-fit federal standards for the protection of drinking water by considering local conditions which may affect certain systems is an important institutional enhancement to TFM capacity building.

- The attitude of the Department is to be supportive of the regulated community. The Department relies on this "work with" attitude rather than a "command and control" approach. The Department is willing to exercise "flexibility" in the oversight of public water systems, while maintaining public health protection through safe drinking water.

Regulatory Enhancements:

- The Department has good knowledge of upcoming regulations before their enactment and can inform regulated systems of expected impacts to their operations.

- The Department is in a strong regulatory position to prevent the use of State dollars for system improvements without TFM capacity standards being met.
- The mandatory operator certification requirements mentioned above as an institutional enhancement are established by State regulation and are a regulatory enhancement.
- Through its regulatory program, the Department provides assistance with, and review of, the technical and managerial capabilities of public water systems.
- The Cross Connection Control Program is an enhancement to the TFM capabilities of public water systems.
- Generally, a regulatory enhancement to TFM capacity is the State's ability to require meters to receive USDA-RD, Community Development Block Grant, and DWSRF funding.
- Department staff works well with systems to help them understand drinking water regulations. This is an enhancement to managerial capacity and points to the high level of trust established between the regulatory agency and the regulated community.

Financial Enhancements:

- The State has the ability to establish priorities for the expenditure of public funds. For example, the State has been able to provide government money to local governments that truly need it. Meeting the need of systems with nitrate standard violations is an example of this ability to target funding to key problems in the State.
- An enhancement to the improvement of system TFM capability would be to increase the percentage of the DWSRF that could be used for grants to systems seeking to improve TFM capacity.

- The State of Nebraska provides matching funds to access federal dollars for its public water program. This commitment to providing state matching funds is a financial enhancement to TFM capacity.
- Similarly, the provision of matching funds for the full capitalization of the DWSRF is an enhancement to TFM capacity building.
- An enhancement to the TFM capacity of systems that have difficulty making system improvements and maintaining affordable utility rates is the ability of the State to allow grants or forgive loans to systems making TFM progress.

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

Legal Enhancements:

- When compliance is an issue, it would be an enhancement to capacity if the Department could provide or arrange for help to local governments to explain and enforce these rules.

Other Enhancements:

- The State's "one call" system before digging creates a measure of protection for water system facilities that might be damaged through improper ground moving activities.
- Nebraska benefits from some strong citizen concern about drinking water issues. Nebraskans are well-served by the advocacy of stakeholder organizations.

Table B3: State Factors That Affect Water System TFM Capacity

Factors	Enhancements	Impairments
Institutional	6	3
Regulatory	7	3
Financial	5	0
Tax	0	3
Legal	1	2
Other	2	2
Total	21	13

B. State Impairments to TFM Capacity

Institutional Impairments:

- Consistent with other states' drinking water programs, the inability of the Department to hire adequate staff to keep pace with the scope of the drinking water statutes and regulations is a serious impairment to improving the TFM capacity of systems. States such as Nebraska are forced by personnel limitations to consider the minimum programmatic responses to system needs, not the optimum level of programmatic resources.
- An impairment worthy of senior management consideration is the division of public drinking water system oversight and assistance between the Department of Regulation and Licensure and Department of Environmental Quality.
- Similar to the impairment mentioned above is the division of water policy and regulation concerns between several State agencies and commissions.

Regulatory Impairments:

- The volume of regulations is very large and difficult to master. This impairment will become more dramatic as new regulations are required and if agency staff resources do not increase. It has become increasingly necessary in many state drinking water programs for individual staff members to be assigned to limited sets of drinking water rules and regulations.
- The dynamic nature of the drinking water regulations is an impairment to TFM capacity because the local water systems depend upon clear information about the rules from the State. As the rules are constantly changing (often in number, rather than content), the inability of the Department to keep pace influences the local systems.

- Capacity development is impaired when regulated systems believe that corrective actions on their part are not absolutely required. Corrective actions – those that ultimately improve TFM capacity – are often prompted by enforcement.

Financial Impairments: None identified for inclusion in *Report of Findings*.

Tax Impairments:

- Tax policies are not designed to encourage the water systems to use financial resources in a proactive manner. State tax code does not appear to offer incentives to public water systems for enhancing TFM capability. For example, tax revenues often serve as a guarantee for revenue based debt (“double-barreled bond”). Limitations on this potential debt security results in higher interest rates for revenue based debt.
- The sentiment against tax increases of all kinds (including “non-tax” increase for utility fees and charges) is an impairment. It seems that nobody wants a tax increase for any purpose.
- By statute, tax lids – limits placed on a system’s ability to raise funds using property taxes – are a financial impairment to financial capacity. While the use of utility revenues is the preferred method of financing a water system “enterprise,” some systems could benefit from the ability – short-term or long-term to enhance revenues through tax receipts. Tax lids are particularly burdensome to some small communities.

Legal Impairments:

- Nebraska water law impairs public water systems from protecting water wells in that surface water and groundwater systems are not integrated and it is often unclear to what extent the systems can control a quantity or quality of a particular water source.

- Nebraska land use and zoning law impairs public water systems from protecting water wells because municipalities have limited jurisdiction over land use outside of a very limited area. Also, municipal authority is limited to adjacent land that is of an urban nature.

Other Impairments:

- There are impediments to the use of land use authorities by local entities where annexation and other land use decisions could have an impact on TFM capacity.
- The Department has difficulty in getting very small and non-community systems involved in its training and technical assistance programs. While this is a local issue, the failure of the State's promotions to get desired participation is a shared (state/local) impairment.

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

A. Local Enhancements to TFM Capacity

Institutional Enhancements:

- An enhancement to capacity at the local level would be the broader use of circuit riders to build institutional capacity.
- Keeping accurate records regarding the water system is essential to management. Improving the water system's maintenance and use of system information – an institutional enhancement – would improve managerial capacity.
- Local programs that recognize the efforts of water system staff to gain operator certification and to maintain certification would be an institutional enhancement.
- Water systems can gain efficiency by sharing equipment with other local systems. As inter-local agreements are established, institutional enhancements will occur and will most likely establish a pattern of cooperation for other common interests.

- Consumer Confidence Reports can improve the public's awareness of their drinking water system. This requirement is an institutional enhancement to TFM capacity.
- Local water system operators have a genuine concern for water quality – system operators drink the water they are serving. This commitment to quality is an institutional enhancement and can be credited to an integration of TFM capabilities at the system level.

Regulatory Enhancements:

- Local water systems are able to request help from the State when noncompliance is an issue. This is an example of how a state regulatory enhancement clearly transfers to the local level as a regulatory enhancement.
- Water systems at the local level have enough discretion and “have the power” to make decisions that will enhance TFM capacity.
- A regulatory enhancement at the local level is the relative lack of regulatory constraints that water systems face in carrying out their operations. There is little “self-imposed” procedural red tape.

Financial Enhancements:

- Costs are impossible to avoid; however, by allowing the State and local governments to develop a more reasonable and flexible plan to address risk in-lieu-of federal governmental regulation, the financial costs could be better controlled and managed.
- A local financial enhancement is their flexibility in making and financing priority decisions.
- An enhancement to financial capacity would be adherence to the principle that water revenues and expenditures be separate from other utility revenue and expenditures. This allows for a clear expression of the financial activity of the water system separate from sewer, solid waste, and other utility functions.

- Water rates are the primary source of revenue for a water system. An enhancement to financial capacity would be to encourage the proper periodic review of (and if needed adjustments in) water rates.

Tax Enhancements:

- At the local level, water systems have options in spending tax revenues. Where these options can be exercised with the long-term interests of the system in mind, such flexibility is an enhancement to TFM capacity.
- The philosophy that water system revenue should be used (whenever possible) to offset the full water system costs is an enhancement to financial capacity. To the extent that tax policy at the local level supports this philosophy, this is a tax enhancement.

Legal Enhancements:

- Large municipal water systems and other multi-purpose governments usually have the capacity to sufficiently address legal issues arising from water system operations. To that extent, local support of legal capacity is an enhancement.

Other Enhancements: None identified for inclusion in Report of Findings.

Table B4: Local Factors That Affect Water System TFM Capacity

Factors	Enhancements	Impairments
Institutional	6	9
Regulatory	3	7
Financial	4	9
Tax	2	3
Legal	1	2
Other	0	2
Total	16	32

B. Local Impairments to TFM Capacity

Institutional Impairments:

- Many small system operators do other things than operate the water system. The complexities of water system operation are exacerbated by the need to address similar demands in other areas.

- Some small water systems have difficulties in attracting and retaining qualified water system personnel.

- Traditional use of flat rate pricing – usually relative to unmetered water customers – constrains implementation of more accurate water rate systems. Citizen resistance to price increases and pricing methodologies is an institutional impairment.

- In small water systems, there is an unwillingness or inability to allow staff to attend training. This unwillingness is often related to the fact that one person is responsible for several key infrastructure operations and has inadequate backup.

- The benefits of water system consolidation – both operations and/or management – are outweighed by the unwillingness of local systems and towns to give up individuality and control.

- Turnover of board members in small systems is an institutional impairment. It is difficult to retain managerial capacity when the management team is constantly changing. The inability of the water system to establish and maintain institutional memory in the face of ever-changing regulations is a significant problem.

- An emerging issue in Nebraska is the inability of small water systems to attract board members.

- High turnover of board members and appointed staff along with the constraints mentioned above results in staff having limited training and experience.

- In very small systems, lack of resources necessarily requires that management be exercised by part-time and volunteer officials. The ability of these officials to meet regulatory requirements for the provision of safe drinking water is tenuous.

Regulatory Impairments:

- Limited staff at the local level impairs the ability of the water system to establish and exercise local regulatory authority. If it could be established, this local regulation would supplement State regulatory efforts, e.g., Cross Connection Control Program.
- While local land use decisions can have a significant impact on the water system, planning authorities do not have to consider TFM capacities when planning for growth.
- Local rules requiring employees to reside within the community may limit a community's ability to hire and retain a certified operator or other key water system staff. Such policies may also be an impediment to sharing operator expertise.
- Water system boards often do not know the regulations or how they are made.
- In reacting to regulatory directives, local officials do not like to be "told" what to do by other governmental officials. At the same time, they may be slow to take corrective action on their own.
- Communication on regulations currently is primarily between operators and State and/or federal officials. There is little communication with elected officials and private owners/boards.
- There is a lack of training required for management oversight groups such as boards, councils, etc. This is directly related to the need to establish institutional memory mentioned above. For example, the water superintendent or a representative of management should also be required to maintain continuing education credits – that would provide a means to educate a city, town, or village concerning the needs for capacity and/or infrastructure improvements.
- It is difficult for an otherwise eligible applicant to demonstrate that the entity has the levels of low to moderate income residents necessary to obtain financial assistance where income level is a key eligibility criteria.
- Cost per connection can be very high for infrastructure improvements in very small systems. This financial impairment often prevents systems from seeking financing for improvements necessary to meet compliance standards.
- A financial impairment at the local level is the inability of small systems to develop an adequate water rate system and to obtain the assistance necessary to establish adequate revenues for the near and long-term. Currently it is difficult to convince board members that the system needs to be self-supporting.
- Because of the age of some systems, they are in need of a complete overhaul. Communities cannot afford the sudden financial impact of renovating their water systems to meet current standards. Capital financing planning and training necessary to meet long-term replacement needs is needed and the lack of the same is a financial impairment.
- There is a lack of funds to hire staff and to allow them adequate time for training, etc.
- Financial management capabilities are limited in many small systems.
- Some small systems lack the economies of scale necessary for compliance and the ability to gain economies of scale by effectively working with neighboring systems.
- Many water systems are run by elected officials. The perception among some of these officials is that it does not seem prudent to do long-term planning and finance improvements because negative reaction to such expenses may "cost" one's position.

Financial Impairments:

- Too many small systems cannot afford all the testing and regulatory requirements. In addition, the cost of new treatment to meet regulatory standards may exceed “reasonable” rate levels.

Tax Impairments:

- At the local level, the State constraints on taxation – those limits on local taxes – are an impairment to TFM capability when the reasonable use of local taxes to support the water system are restricted.
- Limited tax base in small systems.
- No taxing in non-municipal systems.

Legal Impairments:

- Because the cost of legal advice is perceived as too high for most small systems, these systems lack this important managerial capability.
- Perceived or actual liability related to the use of jointly owned equipment and jointly hired personnel may prevent increases in TFM capability.

Other Impairments:

- Local planning entities are not uniformly available across the State of Nebraska. This lack of available local land use and long-range planning entities may place many water systems at a disadvantage. Professional planners could be trained to incorporate TFM principles into their decision making processes.
- The lack of clear guidelines regarding water system security and the uniform implementation of security policies could present liability and TFM problems if not addressed strategically.

Table B5a: Factors that Enhance or Impair Capacity at the Federal Level

Factor	Description	Enhancement	Impairment
Institutional	Let states dictate what is needed	Yes	
	Lack of communication between agencies (Food and Drug Administration, USEPA, etc.)		Yes
	Lack of communication between regions and headquarters; programs		Yes
	USEPA's unwillingness to reevaluate standards when science becomes available		Yes
	Distrust of USEPA by local government entities		Yes
	Actions and process focused on larger systems		Yes
Regulatory	Stakeholder involvement	Yes	
	No federal dollars without TFM	Yes	
	Insufficient in-depth knowledge by well documented health studies		Yes
	The idea that "one size fits all"		Yes
	Growing number of regulations		Yes
	Unfunded mandates		Yes
	Prescriptive nature of regulations		Yes
	Time frames to institute new regulations		Yes
	Constant change in regulations		Yes
	Process has limited very small system input		Yes
	Not easy to understand writing of rules		Yes
	Regulations usually hard to understand and poorly communicated		Yes
Financial	Aid for low income areas (Community Development Block Grants/USDA – RD/DWSRF)	Yes	
	Support of the circuit riders and grass root organizations such as Nebraska Rural Water Association, Midwest Assistance Program, and Nebraska Environmental Training Center through federal funds	Yes	
	USEPA, Community Development Block Grants, and USDA – RD grants to PWS	Yes	
	More realistic cost per benefit studies	Yes	
	Availability of financing at low interest for necessary improvements	Yes	
	Maybe money for very small system operator training expenses	Yes	
	Aid for government created rules (currently unfunded)	Yes	
	DWSRF, including set-asides	Yes	
	Cost of monitoring and treatment for smaller systems		Yes
	USEPA will take 20% of DWSRF funds if the Department does not adopt certain regulations (hurts the water systems, in effect)		Yes
	Requirement of matching funds for some projects		Yes
Tax	Tax on bottled water for assisting states with TFM	Yes	
Legal	Enforcement can come down hard on small systems but is tied up with legal maneuvers with larger systems		Yes
Other	Identifying operator competence as a primary factor affecting capacity development	Yes	
	When the state consolidates systems, it receives less money from USEPA for the program; thus is being punished for accomplishing the goal		Yes

Table B5b: Factors that Enhance or Impair Capacity at the State Level

Factor	Description	Enhancement	Impairment
Institutional	Well trained staff	Yes	
	Require certification and continuing education	Yes	
	Assistance with information, education and technical assistance programs by organizations such as the Nebraska Rural Water Association, Midwest Assistance Program, Nebraska Section AWWA, League of Nebraska Municipalities, Nebraska Environmental Training Center, county extension services, local health departments, Natural Resources Districts, Nebraska Groundwater Foundation, Nebraska Well Drillers Association, American Consulting Engineers Council, public power districts (load management)	Yes	
	State laboratory is part of Regulatory & Licensure agency	Yes	
	Ability to consider local conditions which may affect certain systems	Yes	
	Require certification and continuing education – the operator certification program provides venues to educate operators on good system management – it leads to discussions with management on infrastructure improvement needs	Yes	
	Supportive “work with” attitude of primacy agency; State willing to exercise “flexibility”	Yes	
	Inability of the Department to hire adequate staff		Yes
	Drinking Water Program divided between the Department of Regulation and Licensure and Department of Environmental Quality		Yes
	Division of water concerns between several State agencies and commissions		Yes
Regulatory	Knowledge of upcoming regulations prior to their enactment	Yes	
	No state dollars without TFM	Yes	
	Mandatory operator certification	Yes	
	Assistance with, and review of, the technical and managerial capabilities of public water systems	Yes	
	Backflow program	Yes	
	Ability to require meters to receive USDA – RD Community Development Block Grant and DWSRF funding	Yes	
	Field staff work well with systems on regulations	Yes	
	The volume of regulations is very large and difficult to master		Yes
	The regulations continually change		Yes
Capacity development is impaired when regulated systems believe that corrective actions on their part are not absolutely required		Yes	
Financial	Funnel government money to local governments that truly need it – e.g. nitrate violations	Yes	
	Increase DWSRF grant percentage with TFM	Yes	
	Matching funds for public water program	Yes	
	Matching funds for DWSRF	Yes	
	Ability to allow grants or forgive loans to systems making progress	Yes	
	Too many small systems cannot afford all the testing and regulatory requirements		Yes
	Difficulty in showing low to moderate income to be eligible for Community Development Block Grant funds		Yes
Tax	Money used in a reactive sense vs. proactive sense		Yes
	Nobody wants a tax increase		Yes

	Tax lids, limits placed on a system's ability to raise funds using property taxes		Yes
	Tax lids impact some small communities		Yes
Legal	When compliance is an issue, help local governments explain and enforce these rules	Yes	
	Nebraska Water Law discourages community from protecting the water wells – water land use and zoning		Yes
Other	One call system before digging	Yes	
	Some strong citizen concern in State – i.e. Ground Water Foundation, League of Women Voters	Yes	
	Annexation problems (zoning, land use, and water transfer)		Yes
	Difficulty in getting very small and non-community systems involved in training		Yes

Table B5c: Factors that Enhance or Impair Capacity at the Local Level

Factor	Description	Enhancement	Impairment
Institutional	Develop good public relations – use circuit riders	Yes	
	Keep accurate records	Yes	
	Operator Certification – stay certified	Yes	
	Share equipment with other towns	Yes	
	Consumer Confidence Reports and public awareness campaigns	Yes	
	Genuine concern for water quality – “they” drink the water they serve	Yes	
	Many small systems operators do other things than just operate water systems		Yes
	Not enough well trained personnel to do a complete job; small systems cannot afford this personnel		Yes
	Flat rate pricing – unmetered water supplies		Yes
	Unwillingness to allow staff to take time off for training		Yes
	Unwillingness of local systems and towns to give up individuality and control		Yes
	Turnover of elected officials in small systems		Yes
	Limited training and experience		Yes
	Part time and volunteers in small systems		Yes
Regulatory	Help from the State when noncompliance is an issue	Yes	
	Frequently “have the power” to make changes	Yes	
	Little procedural red tape	Yes	
	Lack of staff		Yes
	Planning authorities do not have to consider TFM capacities when planning for growth		Yes
	Rules requiring employees to reside within the community		Yes
	Do not know the regulations or how they are made		Yes
	Do not like to be “told” what to do, but slow to take action on their own		Yes
	Communication on regulations goes primarily to operators – little communication with elected officials and private owners		Yes
	There is a lack of training required for management oversight groups such as boards, councils, etc. The water superintendent or a representative of management should also be required to maintain continuing education credits – that would provide a means to educate a city, town or village concerning the needs for capacity and/or infrastructure improvements		

Financial	Costs are impossible to avoid; however, by allowing the State and local governments to develop a more reasonable and flexible plan to address risk in-lieu-of federal governmental regulation, the financial costs could be better controlled and managed	Yes	
	Flexibility in making priority decisions	Yes	
	Keep water revenue separate from other utility revenue and maintenance	Yes	
	Update water rates	Yes	
	Cost per connection can be very high for corrections in very small systems		Yes
	Help small systems develop an adequate water rate		Yes
	Many systems need a complete overhaul and communities cannot afford the sudden impact financially – lack of planning for future needs		Yes
	Lack of funds to hire staff, allow them time for training, etc.		Yes
	Financial management capabilities are limited in many small systems		Yes
	Some small systems lack the economies of scale		Yes
	Many water systems are run by elected officials, and it does not seem prudent to do long-term planning that may “cost” one’s position		Yes
	Difficulty in convincing board members that the system needs to fully support itself with its revenues		Yes
	Cost of new treatment may exceed “reasonable” rate levels		Yes
Tax	Options in spending tax revenues	Yes	
	Let water revenue support water	Yes	
	Tax lids – limits on local taxes		Yes
	Limited tax base in small systems		Yes
	No taxing in non municipal systems		Yes
Legal	May have extensive legal authority in municipal systems	Yes	
	The cost of legal advice is too high for most small systems		Yes
	Liability issues on jointly owned equipment and jointly hired personnel		Yes
	Little example of exercising legal authority		Yes
Other	Lack of effective local land use long-range planning entities		Yes
	System security		Yes

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

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

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

IMPROVING TFM CAPACITY THROUGH INFORMATION COLLECTION, INTERGOVERNMENTAL PROGRAM DEVELOPMENT, AND TRAINING & TECHNICAL ASSISTANCE

The Strategy Committee's recommendations for program enhancements can be divided into three categories. These are the collection and interpretation of information, intergovernmental program development, and training and technical assistance. Together there are thirteen specific recommendations.

INFORMATION COLLECTION:

Currently, information is routinely collected relative to the technical capabilities of public water systems. There is a need to begin systematically collecting supplemental information regarding the financial and managerial capacity of systems. The Strategy Committee not only recognized the need for collection of TFM information by the Department, but also felt that the information should be shared with the individuals responsible for the technical, managerial, and financial aspects of running the system. In addition, the Strategy Committee felt that a summary of the TFM information derived from a TFM assessment tool might be helpful to the systems in attracting industry and quality operators to their communities, and recognition from the public. The Strategy Committee suggested the following items as possible responses to this recommendation:

- a. An enhanced sanitary survey would be used to collect TFM information from the systems for later review by the Department and other partners with expertise in financial and managerial areas.
- b. The Department inspector and/or 2% Team member would attend a meeting with the governing body or owner of the public water system to go over the survey and answer any questions, and to encourage the management to consider long-term planning for the system. This exchange of information could be

enhanced by having the acceptance of the report verified by board member signature.

- c. A TMF capacity assessment tool would be developed with results provided to the system following the survey.
- d. The information collected from systems as described above could be analyzed to demonstrate the impacts of TMF assistance programs on systems and could help demonstrate the need for future financial resources and/or changes in local and State taxation policy.

INTERGOVERNMENTAL PROGRAM DEVELOPMENT:

Seven Elements for Improving the Technical, Financial and Managerial Capabilities of Public Water Systems

1. The Capacity Development Strategy Committee recommends that the Nebraska Drinking Water Program continue its efforts to implement its 2% Partnership Program. The Safe Drinking Water Act Amendments of 1996 provide that a portion of Drinking Water State Revolving Fund dollars may be used to fund activities to improve the technical, managerial and financial capacities of drinking water systems. This provision, also known as the 2% "set aside," gives states the option of providing capacity improvement services with this funding during the period that the federal government gives monies to the State for building up the loan program.

Nebraska has chosen to use the set-aside option to develop a 2% Technical Assistance Team. The purpose is to create a public-private partnership mechanism designed to provide technical assistance to the largest number of public drinking water systems. The Department's partners in this effort include the Nebraska Rural Water Association, the League of Nebraska Municipalities, the Midwest Assistance Program, the Nebraska Section of the American Water Works Association, and the Nebraska Environmental Training Center. These partners will meet every two or three months with the Department staff to review a listing of water systems needing assistance and to determine which partner (or partners) might best provide the assistance that is required. The

group will also meet to report on and reflect upon progress that has been made to improve TFM capabilities. *For more information on this program element, please refer to Appendix C.*

2. The Strategy Committee felt that communication and trust between the USEPA, the Department, and the water systems could be improved. The Strategy Committee has suggested that the USEPA provide the Drinking Water Program with an annual Consumer Confidence Report-style report on its performance in overseeing SDWA implementation for the State of Nebraska. The report would help the Department identify opportunities for improving the intergovernmental relationship between USEPA and the Department and possible ways to enhance the effective expenditure of limited drinking water protection resources.

3. Most Nebraskans are provided safe drinking water on a consistent basis. Often customers take this essential public service for granted and are not fully aware of the technical or financial requirements for providing safe water. Customers and politicians carry the perception that the provision of safe water should be enjoyed at little or no cost to consumers, which makes it difficult for water suppliers to charge the water rates necessary to operate the system in a viable manner for the long-term. The Strategy Committee recognized that public education related to the water supply industry would be beneficial:

- a. For example, management accountability for the delivery of safe drinking water by public water systems will be improved through the provision of consumer confidence reports (CCRs) required by the 1996 SDWA Amendments. CCRs provide the public with substantial information regarding the quality of their water. The Department should be actively involved in an education campaign designed to heighten the awareness of the public regarding the information contained in the consumer confidence reports.
- b. The Department should develop and implement programs in public schools related to Drinking Water Week. These public school programs help children understand the importance of safe drinking water and attract the interest of parents.

- c. In addition, the Department should continue to provide displays on their program activities (including TMF capacity development) during the Nebraska State Fair and cooperative information programs (e.g., the joint information programs of the Department and the Groundwater Foundation).
- 4. Small/medium systems with limited funds will not typically be able to afford education efforts that cost money (i.e. mailers, media advertising) and would be least likely to pursue any type of education efforts which all take a certain amount of resources – staff time, expertise, housing, money, etc. Therefore, larger organizations should be encouraged to take the lead in any mass public education efforts. Larger organizations are not limited to federal, state, and local governments – perhaps larger systems, government, and peer group associations could share resources or partner together for any public education efforts.
- 5. Small systems face the challenge of acquiring capital resources for improving or replacing water system infrastructure. This is especially true for non-governmental systems that do not have access to traditional government-sponsored capital financing programs (e.g., Community Development Block Grant Program, USDA-RD). Even with the traditional funding options, small systems may have difficulty accessing capital financing. The Strategy Committee recommends that the Department sponsor a meeting or series of meetings where capital financing agencies, public finance specialists and public water system stakeholder groups could discuss innovative techniques for financing small system capital improvements. The meetings would not only identify opportunities for innovative financing instruments to be developed, but would also identify institutional, legal and financial barriers to the use of those tools.
- 6. The Strategy Committee reports that the lack of planning in rural areas adversely affects the economical provision of safe drinking water. The Department should act as technical resource to help cities and counties acquire the information they need to understand drinking water capacity issues and incorporate these in their planning efforts. This would include considering opportunities for consolidation of existing systems and assurance of adequate capacity in new ones. This is especially relevant in developments occurring in unincorporated areas adjacent to the existing municipal and not-for-profit public water systems. Making better use of existing facilities when development occurs yields better economies of scale in water system operations.
- 7. The Capacity Development Strategy Committee felt that use measurement devices should be required in some situations for a PWS to be eligible for DWSRF. Use measurement devices should be required on all new and existing wells to be eligible for DWSRF funds. Use measurement devices should be required on all services to be eligible unless the owner can demonstrate all of the following:
 - a. The installation of such devices creates an economic impairment whereby the costs of installation of such devices exceeds the potential benefits of such devices, and;
 - b. All unmetered customers are very similar in the nature and quantity of their water use, and;
 - c. The system has in place a comprehensive effective leak detection program and has available an enforceable water conservation plan.

TRAINING AND TECHNICAL ASSISTANCE PROGRAM ELEMENTS:

Six Elements for Improving the Technical, Financial and Managerial Capabilities of Public Water Systems Through Outreach and Technology Transfer

- 8. A significant theme identified in the process of discovering the impairments to TMF capacity of public water systems was the need to improve the knowledge of drinking water protection rules among operation and

management personnel. Often rules and regulations are produced in forms that are difficult for small system operators and managers to understand. This includes problems that public water systems have in explaining to their customers the health protection and risk reduction purposes of new drinking water contaminant standards. The Strategy Committee felt that information provided to operators regarding current rules and future regulation development should be improved. Additionally, water systems that have limited managerial capabilities have difficulty in tracking regulatory changes from their inception as proposed rules, to their adoption as actual State standards. The following items were suggested as possible responses to this recommendation:

- a. Offering incentives for attendance at rules hearings or meetings.
 - b. Development of an automatic e-mail service to keep operators updated on rule development or modification.
 - c. Mailing of an annual "upcoming rules" status update to all water system owners/boards.
 - d. Requesting improved health protection and risk reduction information from USEPA for all proposed drinking water contaminant regulations.
 - e. An effort to improve managerial capacity through on-site board member training. Special focus would be placed on long-term planning for the system, financial management and full cost financing for the system, and regulatory environmental and financial controls.
 - f. Publication or multimedia production of materials that would present simplified versions of drinking water protection rules.
9. Several Strategy Committee members identified the need to encourage partnerships between agencies and among systems. For example, local networking of water system operators and board members could result in the sharing of ideas on how to solve common problems, informal mutual aid agreements for use of equipment and personnel, and reduction of the need for regulatory agency intervention. The following suggestions were made with regard to this recommendation:
- a. The use of training sessions or peer review forums targeted to operators and board or city council members should be encouraged. Attendance at these sessions would allow operators and board/city council members to get together and network before and after the sessions.
 - b. Partnerships between technical assistance providers should be encouraged through joint planning meetings with the Department.
 - c. USEPA 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.
 - d. Reimbursement for these types of activities should be sought from the USEPA operator certification training program.
10. The Strategy Committee members recognize that cooperation of technical assistance and information providers should be encouraged. Nebraska's 2% Technical Assistance Team will enhance such cooperation. In addition, an examination of potential service provider linkages should be undertaken to discover how to better serve the public.
11. Fiscal capacity and financial management are two of the essential components of financial capacity. Adequate funding of water system operations is essential to the current and future need to provide safe drinking water to the public. Proper stewardship of the water utility fund is a demonstration of financial capacity. Annual review of rates is important to sustaining the fiscal health of the water system. Yet, many small water systems in the State of Nebraska do not routinely review and adjust water service charges to keep pace with the full costs of managing the system. Sometimes, operator turnover is a symptom of a lack of willingness to fully fund all operational costs. The 2% Technical Assistance Team provides technical assistance to water systems in the area of financial management and rate setting. It is recommended that water system rate setting and financial management training and technical assistance be enhanced and provided to small water systems in order to improve financial and managerial capacity.

12. The Strategy Committee made special note of the turnover of water system board/council members. Small systems depend on volunteer (or low pay) board members to oversee the provision of safe drinking water to the public. High member turnover in small systems results in a loss of managerial capacity (and continuity). Unfortunately, this occurs as the drinking water regulatory environment becomes more complex. The Strategy Committee recommends the development of supplemental training materials for new board/council members that would help them understand their role in the oversight of the water system, and in helping their system acquire and maintain TMF capacity.
13. Handbook on Drinking Water System Statutes and Rules. The Department currently provides a technical assistance notebook to all certified operators. It is recommended that a specific handbook on statutes and regulations relative to public drinking water systems be produced and distributed. The purpose of the handbook would be to provide "plain English" information on the federal and State statutes, regulations, rules and guidance relative to the capacity requirements and all other requirements of the SDWA. The key to the production and delivery of the handbook will be training sessions for water system operators, managers and customers.

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

This *Report of Findings* offers the Committee's suggestions about how the Nebraska Department of Health and Human Services Regulation & Licensure (Department) might develop a strategy for improving the technical, financial and managerial capabilities of public water systems. In developing that strategy, the Committee suggests that the Department measure the success of its capacity development efforts in three ways:

1. Compliance Tracking

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

2. Outreach and Assistance

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

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

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

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

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

3. Planning Activities

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

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

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

However, the Committee could not possibly encompass in its membership all organizations and individuals within the State who might have an interest in this subject. In its first meeting, the Committee examined the question of who else should be involved in the process of preparing a drinking water capacity development strategy. They concluded that certain key interest groups, beyond those already represented, should be encouraged to participate with the Committee if at all possible. Additionally, other interested persons and organizations were invited to provide information regarding their position through an interview process or in writing. Finally, the public at large was engaged to the greatest extent possible through a series of public involvement initiatives. A questionnaire was developed to facilitate public input.

Other Public Involvement Initiatives

The Committee agreed that their recommendations should be presented to the public at large, with an opportunity for comments and suggestions. Accordingly, during the month of June, three public meetings will take place throughout the State. Public comments will be received through June 8, 2000. Review of the comments by the Committee and the Department will take place on June 9, 2000.

APPENDIX A: CAPACITY DEVELOPMENT STRATEGY COMMITTEE MEETING HIGHLIGHTS

The Nebraska Capacity Development Strategy Committee met six times in 1999 to consider developing a capacity strategy for public water systems. During the month of September, 1999, the draft of the Nebraska Capacity Development *Report of Findings* was prepared using input from Committee members, Department management, and public comments. There is a public record associated with these meetings. Persons wishing to obtain a more detailed record of the proceedings may do so by contacting the Department staff at 402-471-2541.

Highlights of the Capacity Development Strategy Committee

March 18, 1999

A history of capacity development and the provisions of the SDWA, as amended in 1996, were presented to the Committee by Bill Jarocki of the EFC. Jack Daniel of the Department Drinking Water Program explained to the Committee that the State's drinking water regulations needed to be revised to include explicit language reflecting the requirements of Section 1420(a). He indicated that the Department was planning to make these amendments to the drinking water regulations through a rulemaking process, and asked for volunteers from the Committee. A list of volunteers was compiled for a Subcommittee conference call to be held on March 26, 1999, to begin work on new system capacity development regulations and strategies for existing public water supply systems.

April 15, 1999

Bill Jarocki presented a review of capacity development strategies to the Committee for those members not present at the first meeting. The Committee spent the rest of the meeting continuing to develop draft language for new systems. The Committee was unable to complete draft language at the conclusion of the meeting and agreed to let the Department finalize the draft language for a conference call with the Subcommittee at a later date.

May 27, 1999

Jack Daniel informed the Committee that the hearing date for the New System Rule had been changed to July 15th. The Board of Health met on July 19th. After the Board's approval, the rule was to be forwarded to the Attorney General's office. Bill Jarocki reviewed the presentation given by Peter Shanaghan of U.S. EPA at the Rural Community Assistance Program National Training Conference in March 1999 entitled "Existing System Capacity Development: Building a Strategy for the Future, Session II." Copies of the slide show presentation were handed out. A brainstorming session regarding Item 1420(c)(2)(C) then took place among the Committee members to determine what the State of Nebraska had done to improve TFM capacity of systems and what had worked. Areas covered included financial, conservation, "helpers," regulations, financial capital planning, partnerships, and the true cost of providing safe water. Lastly, a matrix relating to Item 1420(c)(2)(B) – factors that enhance or impair TFM capabilities at the federal, state, and local levels – was distributed to each Committee member to fill out and be prepared to discuss at the next meeting.

July 16, 1999

Bill Jarocki reviewed the capacity development deadlines and what was involved at each stage. The Committee then began work on Item 1420(c)(2)(B), factors that enhance or impair capacity development at the federal, state, and local levels in institutional, regulatory, financial, tax, legal, and other areas. The Committee broke into two groups and worked from a compilation of factors previously identified by members. The groups individually selected those factors that they felt deserved specific mention in the *Report of Findings*. The groups then came together and compiled one list of factors to be addressed in the *Report of Findings*.

August 27, 1999

The Committee discussed the process that the *Report of Findings* would go through upon approval

of the Committee and following public comments. The Committee then discussed 1410(c)(2)(C), Recommendations on how the State can use its authority and resources to help water system capacity. The Committee determined those items they wanted identified, and then reviewed the enhancements and impairments that were identified in 1410(c)(2)(B).

October 15, 1999

The Committee spent the majority of the day discussing how to develop a decision model to rank public water systems in need of assistance. The Committee identified a need to develop the criteria to rank public water systems for assistance based upon public health concerns, and develop a definition for each level of public health concern – critical, serious, etc. Jack Daniel favored having the Technical Assistance (TA) team assist the Department in establishing the criteria for 3 categories (problem systems, mediocre systems and good systems). After the criteria have been defined and approved by the Department, Department staff will rank these systems based upon information in the files. After the ranking, the TA team will determine which TA partner could best help each system. The TA team will meet with the Department every 2 to 3 months to report their progress. The goal is to move systems from the problem category into the mediocre or good categories.

April 21, 2000

The majority of the meeting entailed a detailed review of the draft *Report of Findings*. A discussion of a public outreach plan then followed, with the following three ideas to be used by the Department – public meetings, the Internet, and press releases. The process for completing the *Report of Findings* by the August 6, 2000 deadline was determined. May 1st – finalize draft *Report of Findings* and schedule public outreach meetings. June 9th – Committee meeting, prioritize and rank findings the Committee feels should be implemented by the Department, sign cover letter. June 10th – Department starts developing a strategy proposal for implementing the findings. June 30th – Department completes strategy proposal for implementing the findings. July 21st – Agency Director receives document for review. August 6th – deadline for submitting the strategy to USEPA.

May 1, 2000

The Committee members held a special meeting to discuss the language in finding number seven regarding water meters. Jack Daniel indicated that he would make every effort to put the final strategy proposal out for public comments, time permitting before the USEPA August 6th deadline.

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

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

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

Factors that Enhance or Impair Capacity at the Federal Level Not Noted in Findings

Factor	Description	Enhancement	Impairment
Institutional	Add more personnel	Yes	
	ASCS	Yes	
	Fluoride Program	Yes	
	Federal Flood Insurance Program	Yes	
	Ability to compare similar sized systems throughout the country for rates, use, etc.	Yes	
	Lack of funds to do a complete and thorough job		Yes
	Lack of uniformity among USEPA regions		Yes
Regulatory	Sound science	Yes	
	Case by case analyses	Yes	
	Ability to require meters and adequate rates to be eligible for federal funding	Yes	
	Allow the individual states to assess the particular risk and develop timetables and strategies to meet SDWA goals – one size regulations do not fit all	Yes	
	Employ “good science” in setting standards – at best, the LCR is based on poor scientific evidence	Yes	
	Flexibility for very small systems	Yes	
	Requiring Capacity Development Strategy	Yes	
	Lack of science		Yes
	The process of issuing SDWA rules based upon separate issue is causing some problems – it is always better not to have “all your eggs in one basket”		Yes
Financial	Require metering of water	Yes	
	Fewer unnecessary regulations	Yes	
	More unfunded regulations		Yes
	Federal support for farming programs utilizing pesticides		Yes
	Sometimes monies spent on fighting regulations rather than complying with them		Yes
Tax	Money to do the job right	Yes	
	Fewer unnecessary regulations	Yes	
	They have it	Yes	
	Small systems do not have the tax base to support government created rules		Yes
	They do not always use it for Capacity Development		Yes

	priorities		
Legal	Financial assistance for legal advice	Yes	
	Less in depth verbage	Yes	
	Government created rules that require legal counseling to understand		Yes

Factors that Enhance or Impair Capacity at the State Level Not Noted in Findings

Factor	Description	Enhancement	Impairment
Institutional	State funding to community colleges to train people going into water business	Yes	
	Due to the current program steps employed by the Federal government, states are impaired from setting reasonable strategies to assess risk		Yes
Regulatory	More informative media attention	Yes	
	Offset timeframes for compliance	Yes	
	State plumbing code	Yes	
	The requirement to complete inventory summary sheets keeps viable data for feasibility studies at hand – any feasibility study to address capacity development is only as good as the historical data kept by the water system	Yes	
	Too many unfunded regulations at once		Yes
Financial	Require metering of water	Yes	
	State aid	Yes	
	Natural Resources Commission	Yes	
	Community Development Block Grant funds	Yes	
	Providing matching funds for DWSRF	Yes	
	Little oversight of local budgeting process		Yes
Tax	Encourage pre-planning	Yes	
	Tax on bottled water (State) to be used for local TFM	Yes	
Legal	More trained personnel	Yes	
	Keep language simple	Yes	
	More money spent for legal issues on regulatory compliance rather than system infrastructure updates		Yes
	No State plumbing code		Yes
Other	Provision of information and education regarding TFM and the relationship of capacity to compliance	Yes	
	The work being done by the Nebraska Section AWWA, Nebraska Water Environment Federation, League of Municipalities and Rural Water Association enhances the education of water operators and managers about the need to develop infrastructure and capacity development plans	Yes	

Factors that Enhance or Impair Capacity at the Local Level Not Noted in Findings

Factor	Description	Enhancement	Impairment
Institutional	Update knowledge continuously	Yes	
	Some long-time friendships between towns people	Yes	
	The efforts undertaken by the local governing body to maintain a good system, with good operators, engineering staff and management – this leads to good operational analysis of the water system. That analysis provides the basis for determining infrastructure and capacity development needs	Yes	
	Water consumers take safe drinking water for granted		Yes
Regulatory	More State personnel to assist	Yes	
	Fewer regulations	Yes	
	Ability to require “rural” use and non-residential uses	Yes	
	Unfunded federal mandates with little or minute health risks		Yes
	Attitude		Yes
	General failure to know and understand all the regulations governing public water supply systems		Yes
Financial	Aid, which is determined by the State on a case by case need	Yes	
	Low income loans or grants	Yes	
	Small surcharge on utility bill for TFM	Yes	
	Federal aid	Yes	
	The cost of doing capacity development projects can negatively impact industrial and residential growth		Yes
	Limited resources in smaller systems		Yes
Tax	Funnel the money where it is needed	Yes	
	Let water revenue support water	Yes	
	Ability to obtain general purpose bonds for financing	Yes	
	Local governments need to increase tax base, design for public water standards		Yes
Legal	State personnel to support compliance and improvement issues	Yes	
	More trained State personnel	Yes	
	Keep language simple	Yes	

APPENDIX C: NEBRASKA'S 2% TECHNICAL ASSISTANCE TEAM

With the 2% technical assistance set-aside funds from the Drinking Water State Revolving Fund (DWSRF), Nebraska is working with several groups to develop partnerships between groups and systems in order to help communities get the most bang for the buck.

The Nebraska Department of Health and Human Services Regulation and Licensure will provide a list of systems that are most in need of assistance. The Nebraska Rural Water Association, the League of Nebraska Municipalities, the Midwest Assistance Program, the Nebraska Section of the American Water Works Association, and the Nebraska Environmental Training Center will meet every two or three months to go over the list, to determine which entity can best provide the assistance that is required, and to report on progress that is made.

The Nebraska Rural Water Association will provide on-site technical assistance to systems that are experiencing problems. They often invite other systems to watch and participate in their activities, so that it can be a learning experience for all involved. They will help public water systems assess infrastructure adequacy and options, review financial management and water rates, assess operational issues by providing on-site visits, and identify options for alternative methods of operation.

The League of Nebraska Municipalities is preparing a video directed at the decision-makers of systems. This will educate them in what needs to be done in order to keep a system in compliance, and will identify new rules that are under development. It will also address capacity development for existing systems. This video will be available without charge to any system wanting it. It will also be available to all the providers of technical assistance, to help them in their work with the systems.

The Nebraska Section of the American Water Works Association will purchase manuals to give to those systems that need them. They will also develop a mentoring program, in which operators from larger systems will work with operators of smaller systems to help them with problems, show them how to take samples, or provide whatever type of assistance the smaller systems need.

The Midwest Assistance Program will aid systems by helping them procure engineering services, complete pre-applications for financial assistance, identify agencies that provide funding, and will provide a tool for systems to assess their managerial and technical capacity. They will also help systems consider options for alternative methods of operation or management.

The Nebraska Environmental Training Center will put on seminars on water treatment, designed to provide operators with the hands-on knowledge they will need to operate equipment and treat water. This is intended to be more in-depth than is allowed in the operator training courses.

Attachment B – HHSS-R&L Enhanced Sanitary Survey

Nebraska Department of Health and Human Services Regulation and Licensure
 Environmental Health Services Section – Drinking Water Program
Public Water Supply Routine Sanitary Survey or Inspection for Cause

PWSID #: NE31 - _____ Name: _____
 County: _____ NRD #: _____ System Classification: ___ 1 ___ 2 ___ 3 ___ 4 ___ 5
 Permit #: _____ Issue Date: _____ Inspection by: _____
 Accompanied by: _____ Title: _____
 Inspection Date: _____ Last Inspection Date: _____ Type of System: ___ C ___ NTNC ___ TNC

SYSTEM INFORMATION

Mailing Address: _____ Physical Address: _____
 City / State / Zip _____
 System Phone Number: () _____ System Fax Number: () _____
 E-mail address if applicable: _____
 Administrative Contact Person: _____ Phone: () _____
 Financial Contact Person: _____ Phone: () _____
 Legal Contact Person: _____ Phone: () _____
 PWS Owned by: _____
 Governing Body: _____
 Is there a defined organizational structure for decision making: Y ___ N ___

OPERATIONAL INFORMATION

Operator in Responsible Charge: _____ Title: _____
 Certification Grade: ___ 1 ___ 2 ___ 3 ___ 4 ___ 5 Certificate #: _____ Expiration Date: _____
 Home Address: _____ Home Phone #: () _____
 _____ Cell Phone #: () _____
 E-mail address if applicable: _____ Pager Phone # () _____

Other Certified Operators and System Personnel:

Name	Grade	Certificate #	Expiration Date

GENERAL SYSTEM INFORMATION

Population Served: _____ Total # of connections: _____

% Metered Connections: _____ # residential: _____ # commercial: _____

System Interconnections: _____ Reason: ___Purchase ___Sell ___Emergency

_____ Reason: ___Purchase ___Sell ___Emergency

_____ Reason: ___Purchase ___Sell ___Emergency

Average Daily Production: _____ MG Peak Daily Production: _____ MG

Peak Hourly Demand: _____ GPM Maximum Daily Production: _____ MG

Total Annual Production: _____ MG

Water Rates: (attach rate schedule) _____

SYSTEM RECORDS / PROGRAMS

	S	U	NA	Comments
System Maps				Last update:
Water Quality				
Quantity				
Maintenance Records				
Customer Billing				
Customer Complaints				
Cross-Connection Control Program				
Sample Site Plans				
Wellhead Encroachment / Wellhead Protection Policy				
Emergency Phone List				
Emergency Plan				
Laboratory Reports				
Short-term Planning				
Long-term Planning				(Master Plan)
CCR(s)				
O&M Manual				

Other Records and Comments: _____

WATER SOURCE INFORMATION

Source Type: Surface Water Infiltration Gallery Spring Well Other: _____

Does the System have a Watershed Management Program: Y ___ N ___ N/A ___ (Attach latest copy of report)

Does the System have a delineated Well Head Protection Area: Y ___ N ___ N/A ___

Has the WHPA officially been adopted by the system: Y ___ N ___ N/A ___ Date: _____

Has an encroachment resolution or ordinance been adopted: Y ___ N ___ N/A ___ Date: _____

Complete a Source Water Vulnerability Assessment for each source and attach to report

Does the system have a delineated SWAP Area: Y ___ N ___ N/A ___

Has a contaminate inventory for the WHPA been completed: Y ___ N ___ N/A ___ Date: _____

Has a contaminate inventory for SWAP been completed: Y ___ N ___ N/A ___ Date: _____

Is the Source Water Quality tested for each source: Y ___ N ___ N/A ___ Frequency: _____

Comments: _____

Is there an emergency response plan for spills within SWAP or WHPA Areas: Y ___ N ___ N/A ___

Is the Source adequate to meet current needs: Y ___ N ___

Is the Source metered at all sites: Y ___ N ___

Are there provisions for drought mitigation or management: Y ___ N ___ N/A ___

Are the source water facilities located within a flood plain: Y ___ N ___ N/A ___

Has the source been ever flooded: Y ___ N ___ N/A ___

If flooded are operations impaired Y ___ N ___ N/A ___

What if access is flooded: _____

Comments on Source Water: _____

SOURCE FACILITIES – GROUNDWATER SUPPLY FACILITIES
(complete 1 sheet per source or well)

Well ID #: _____ Well Common Name: _____

Frequency site is inspected by PWS: ___ Daily ___ Alternate Days ___ Weekly ___ Other: _____

Is the well sealed properly at the surface: Y ___ N ___ Comments: _____

Casing extends min of 18”(CWS) or 12”(NCWS) above well slab, floor, or ground surface: Y ___ N ___

Well vent termination and screening acceptable: Y ___ N ___ Comments: _____

Is the well blow off properly capped and/or screened Y ___ N ___

Are all other applicable screens in place: Y ___ N ___ Comments: _____

Is a sampling tap available: Y ___ N ___ Is the sample tap smooth nosed: Y ___ N ___

Is a pressure gauge available: Y ___ N ___ Is a chemical injection tap available: Y ___ N ___

Is an approved electrical outlet available for chemical tap: Y ___ N ___

Is well metered: Y ___ N ___ Type: _____ Size: _____ Make / Model: _____

Serial #: _____ Meter Reading: _____ Electric ___ Water ___

Are chemicals injected at the well: Y ___ N ___ If yes, what chemical(s): _____

Observed condition of piping and valving: _____

Observed condition of electrical systems: _____

Is lightning protection in place: Y ___ N ___ Type: _____

Is back-up power available at site: Y ___ N ___ If yes, type: _____

Are cross-connection requirements adequately met: Y ___ N ___

Is the facility well maintained and secure: Y ___ N ___

Does well meet criteria for potential GWUDI: Y ___ N ___

Has the GWUDI protocol been completed: Y ___ N ___ Date: _____

Was the system deemed to be GWUDI: Y ___ N ___

Are there any encroachments on this well: Y ___ N ___ If yes, what is the encroachment(s): _____

Comments: _____

WELL INFORMATION

Well ID #	Motor HP	Vert. Turb.	Sub.	Well Depth Ft.	Screen Const. Type	Top of Screen Depth	Cased Full Length	Static Water Level	Pumping Water Level	Prod. In GPM	Well Vent Size	Well Blow Off Size	Comments

Frequency wells are inspected by PWS: _____ Daily _____ Alternate Days _____ Weekly _____ Other _____

Comments: _____

SURFACE WATER SUPPLIES AND FACILITIES

Source Location: _____

Source Common Name: _____

Frequency site is inspected by PWS: Daily Alternate Days Weekly Other: _____

Average Daily Flow: _____ gpm Maximum Daily Flow: _____ gpm

Is Intake Structure able to function at multiple depths: Y N Depths: _____

Last inspection date: _____ Inspection: Visual Mechanical Other: _____

Do conditions exist that can cause fluctuations in water quality: Y N Explain the conditions: _____

Can water be withdrawn during a prolonged drought: Y N Min. usable water level: _____

Are facilities well maintained: Y N Are facilities secure: Y N

Does facility allow recreational use: Y N Are there special provisions for recreational use: Y N

Has this surface water withdrawal been approved: Y N N/A

If approval has been granted, what is the maximum allowed withdrawal: _____

Comments: _____

INFILTRATION GALLERY FACILITIES

Average Daily Flow: _____ gpm Maximum Daily Flow: _____ gpm

Construction Material: _____

Number of Laterals: _____ Length of Laterals: _____

Is a Booster Pump in use: Y ___ N ___ Boosted flow: _____ gpm

Have there been any significant fluctuations in water quality: Y ___ N ___

If yes describe: _____

Last inspection date: _____ Inspection: ___ Visual ___ Mechanical ___ Other: _____

Routine Maintenance Frequency: _____

Are facilities well maintained: _____

Are facilities secure: _____

Condition of associated piping, valving, and other appurtenances: _____

Has source been evaluated for GWUDI: Y ___ N ___ Date: _____ Findings: _____

SPRING SOURCE FACILITIES

Average Daily Flow: _____ gpm Maximum Daily Flow: _____ gpm

Is the spring protected from contact with animals and vandalism: Y ___ N ___

Spring Box or Collection Box Condition: _____

Is spring drainage adequate to protect from run-off: _____

Are all setback requirements met: _____

Are facilities well maintained: _____

Have Springs been evaluated for GWUDI: Y ___ N ___ Date: _____ Findings: _____

Comments: _____

TRANSMISSION OF SOURCE WATER

Does the transmission line deliver all raw water to the treatment plant: Y ___ N ___ N/A ___

If No explain: _____

Where does the distribution system start: _____

Number of Transmission Lines: _____

Location	Age in years	Length, miles	Construction Date	Type of Material	# Air Relief	# Blow Off

Does the air relief(s) terminate above ground level: Y ___ N ___ Is(are) the air relief(s) screened: Y ___ N ___

Is(are) the blow off(s) capped: Y ___ N ___

Is there a valve exercise program for the transmission lines: Y ___ N ___ N/A ___ Frequency: _____

Are there materials available for repairs for the transmission lines: Y ___ N ___

Comments: _____

TREATMENT FACILITIES AND PROCESSES

Physical location and directions if necessary: _____

Is Treatment Plant located within 100-year floodplain: Y ___ N ___ Comments: _____

Are there any potential contamination sources in the vicinity of the plant: Y ___ N ___

If yes explain: _____

Are the grounds and facility well maintained: Y ___ N ___ Is the facility staffed 24 hours per day: Y ___ N ___

Is the facility secure from trespassers and vandalism: Y ___ N ___ Comments: _____

ATTACH AN ENGINEERING DIAGRAM OF THE FACILITY SHOWING FLOW DIRECTION AND CHEMICAL INJECTION POINTS

Design Capacity of plant: _____ MGD Historical daily Maximum over last 3 years: _____ MGD

Are there any limitations to plant flows: Y ___ N ___ If yes what are the limitations: _____

Is there a back-up or stand-by power source: Y ___ N ___ Type: _____

Frequency of testing of emergency power source: _____ Preventative Maintenance Program: Y ___ N ___

TREATMENT PROCESS BEING USED

Conventional Filtration: _____ Direct Filtration: _____ In-Line Filtration: _____

Slow-Sand Filtration: _____ Single-Stage Softening: _____ Two-Stage Softening: _____

Conventional Filtration / Softening: _____ Are there Split and Complex Treatment Trains: _____

Membrane Filtration: _____ Micro-Filtration: _____ Ultra-Filtration: _____

Nano-Filtration: _____ Reverse Osmosis: _____ Greensand Filtration: _____

Ion-exchange: _____ Purpose: _____

Aeration: _____ Type: _____

Disinfection: _____ Pre: _____ Post: _____ Other: _____

Oxidation: _____ Purpose: _____

Sequestering: _____ Purpose: _____

Fluoridation: _____ Other Processes: _____

PRESEDIMENTATION BASINS

(If all basins are not same dimension complete a separate sheet for each basin)

Number: _____ Capacity: _____ MG _____ MGD

Basin Measurements: _____ Baffling Factor: _____

Average Turbidity Removal: _____ NTU Historical Turbidity Removal Range: _____ NTU

Frequency of Cleaning: _____

Sludge Disposal: _____

Contamination Potential: Waterfowl: Y ___ N ___ Runoff: Y ___ N ___ Other: Y ___ N ___

Comments: _____

FLOW CONTROL AND METERING

Source Water Influent Metered: Y ___ N ___ Type: _____ Size: _____ Make: _____

Model: _____ Serial #: _____

Finished Water Outlets Metered: Y ___ N ___

Location	Type	Size	Make	Model	Serial #	Comments

RAPID MIX PROCESS

Type: Mechanical: _____

Static In-line: _____

Diffuser: _____

Hydraulic (Baffled): _____

Chamber Measurements: _____ Baffling Factor: _____

Chemicals being fed: _____

Continuous feed: Y ___ N ___ Are feeds flow paced: Y ___ N ___ Manual Adjusted: Y ___ N ___

Variable Speed: Y ___ N ___ RPM: _____ RPM Range: _____

Multiple Units: Y ___ N ___ Number: _____ Locations: _____

Maintenance Frequency: _____

Are there visible hydraulic inadequacies: Y ___ N ___ Describe: _____

Is Cross-connection control protection adequate where applicable: Y ___ N ___ If no, explain: _____

CHEMICALS AND CHEMICAL FEED SYSTEMS

Chemical Name	Storage in gal.	Day Tank in gal.	Avg. feed in lbs/day	NSF 60 Cert.	UL Cert.	AWWA Stnds.	Safety Equip.	MSDS Avail.	Labeling & Signage	Spill Containment	Storage Secure & safe	# of days stored	Comments

Are MSDS(s) readily accessible to all personnel: Y ___ N ___ Comments: _____

Is the appropriate chemical safety equipment available to all personnel: Y ___ N ___ Comments: _____

Are there any visible problems with the application points: Y ___ N ___ Comments: _____

Additional comments: _____

CHEMICAL FEED EQUIPMENT SPECIFICATIONS

Description	Location	Make	Model #	Feed Range in #s per day	NSF 61 Cert.	Feed Rate Description			
						Well or motor paced	Flow Paced	Manual	Other

Are redundancy or back-up units available for all feeders: Y ___ N ___ Comments: _____

Cross-connection control for chemical feeders if needed: Y ___ N ___ Comments: _____

Comments: _____

COAGULATION AND FLOCCULATION *(If non-similar multiple units complete one sheet for each one.)*

Type: Mechanical: _____ Baffled: _____ Number: _____

Static: _____ rpm Variable Speed Range: _____ rpm Baffling Factor _____

Vertical Shaft: _____ Paddle: _____ Up-flow Clarifier: _____

Basin(s) Measurements: _____

Does process appear to be working correctly: _____

Is there a preventative maintenance program for the equipment: Y ___ N ___ Comments: _____

Is there Jar Testing Capability at the facility: Y ___ N ___ Frequency of use: _____

Comments: _____

SEDIMENTATION / CLARIFICATION *(If non-similar multiple units complete one sheet for each one.)*

Type: Cross-flow Basin: _____ Radial Flow Basin: _____ Up-flow Clarifier: _____

Number of Basins: _____ Capacity of Basins: _____ MG Baffling Factor _____

Basin Measurements: _____

Does flow appear to be evenly distributed: Y ___ N ___ Is there evidence of short-circuiting: Y ___ N ___

Method of Sludge Removal: Mechanical: _____ Type: _____

Manual: _____ Frequency: _____

Average Settled Turbidity: _____ NTU Historical settled Turbidity Range: _____ NTU

Disposal Location: _____

Comments: _____

PRESSURE FILTERS *complete 1 sheet per filter*

Number of Filters: _____ Filter ID (name or #): _____ Date Installed: _____

MEDIAS: Mono: _____

Dual Media: _____

Multi-Media: _____

Maximum Filtration Rate at design capacity: _____ gpm/sq. ft.

Filter size or capacity: _____

Date of last internal inspection: _____ by _____

Attach copy of last internal inspection if available

Were any deficiencies noted in the inspection: Y ___ N ___ If yes, have they been corrected: _____

Are loss of head gauges present on the inlet and outlet of the filter: Y ___ N ___

Are the gauges functioning: Y ___ N ___

Does the filter have a flow indicator: Y ___ N ___ Comments: _____

What criteria is used to initiate a backwash cycle: _____

Briefly describe the backwash procedure: _____

What is the high rate of backwash flow: _____ gpm/sq. ft.

How is the backwash water disposed of: _____

Is turbidity monitoring done on the backwash waste: Y ___ N ___

Is turbidity monitoring done on the filter effluent: Y ___ N ___

If no, how is adequacy of the backwash process evaluated: _____

Comments: _____

GRAVITY FILTERS *(complete one sheet per filter)*

Number of Filters: _____ Filter ID (name or number): _____ Installation Date: _____

Filter Technology: Rapid Sand _____ Slow Sand: _____

Filter Media (check all that apply): Sand: _____ Anthracite: _____ GAC: _____

Gravel _____ Garnet: _____ DE _____ Other: _____

Filter Dimensions: _____ Baffling Factor: _____

Date of last media installation or replacement: _____

Are there any visible problems with filter media: Y ___ N ___ Comments: _____

Type of underdrain system: _____

Frequency underdrain system is inspected: _____

Designed filtration rate: _____ gpm /sq. ft. Rate during inspection: _____ gpm/sq. ft.

Design Media Depth: _____ Current Media Depth: _____

Criteria for initiating backwash: _____

Monitoring Equipment: Rate-of-Flow Controller(s): _____ Are these variable or set: _____

Filter Effluent Turbidimeters: _____ Loss-of-head indicator(s): _____

% Media Expansion during backwash: _____

Average Filter Run time: _____

Is there a Surface Wash System for the filter: Y ___ N ___ Air Scour: Y ___ N ___

Is there filter to waste capability: Y ___ N ___ Comments: _____

How are recently washed filters brought back onto line: _____

Condition of Pipe Gallery: _____

Has a filter profile been developed for the filter: Y ___ N ___ Comments: _____

Has a filter self-assessment been completed for the filter: Y ___ N ___ Comments: _____

Date of last Assessment: _____ Significant findings: _____

DISINFECTION PROCESSES

Pre-Disinfectant used: Chlorine Ozone Chlorine Dioxide Other: _____

In-plant disinfectant: Chlorine Ozone Chlorine Dioxide Other: _____

Distribution Disinfectant Used: Chlorine Chloramines Chlorine Dioxide
 Other: _____

Chlorine Type Used: Gas – 150lb cylinder Gas – 1T cylinder Gas-RR tank cars
 Liquid – Sodium Hypochlorite: _____ % Calcium Hypochlorite: _____ %

Primary Purpose: Oxidation Disinfection Both

Chlorine Dioxide: On-Site Generated: Y N If yes, number of generators: _____

Size of chlorine cylinders: _____ Bulk Chlorite Storage: _____ gal

Primary Purpose: Oxidation Disinfection Both

Frequency of generator yields: _____ Average yield % _____

Method used to detect residuals: _____

Is there a PM Program for the generators: Y N

Date of last Preventative Maintenance on generators: _____

Ozone: Number of Generators: _____ Capacity of Generators: _____

% Ozone being generated: _____ %

Primary Purpose: Oxidation Disinfection Both

Are all applicable residual monitors operational: Y N

Are Excess Ozone Destructors operational: Y N

Is there a PM Program for the Generators: Y N

Date of Last PM on Ozone Generators: _____

DISINFECTION APPLICATION POINTS

Disinfectant Type	Application Point

How was the T10 Times calculated: Tracer Study: _____ Theoretical: _____

Date Tracer Study was conducted: _____ By: _____

Identify the CT sampling zones:

A.) _____ Baffling Factor: _____

B.) _____ Baffling Factor: _____

C.) _____ Baffling Factor: _____

D.) _____ Baffling Factor: _____

E.) _____ Baffling Factor: _____

F.) _____ Baffling Factor: _____

G.) _____ Baffling Factor: _____

What is frequency of CT Calculations: _____

Are at least 3 years of Daily CT calculations available: Y ___ N ___

Are the CT Calculations being performed correctly: Y ___ N ___

Testing Equipment for CT Calculations in each Zone:

Chlorine Residual: ___ Grab or ___ Continuous Instrument Model: _____ Calib. Freq.: _____

pH ___ Grab or ___ Continuous Instrument Model: _____ Calib. Freq.: _____

Temperature in C ___ Grab or ___ Continuous Instrument Model: _____ Calib. Freq.: _____

Comments: _____

What is the Residual at the POE: _____ mg/L Is continuous monitoring for residuals being used: Y ___ N ___

Model of Continuous Monitor: _____

Is there an adequate spare parts inventory: Y ___ N ___ Reagent Supply: Y ___ N ___

Residual Information Recording: ___ Chart-recorder ___ Strip-charts ___ Data-logging

Is there a level of redundancy: Y ___ N ___ Comments: _____

What is the frequency of verifying the continuous read testing results by another method: _____

What is that method: _____

Is all applicable cross-connection devices installed: Y ___ N ___ Comments: _____

DISTRIBUTION SYSTEM

Are there maps of the Distribution System(s): Y ___ N ___ Date of Last up-date: _____

How often are maps up-dated: _____

Are the following features shown on the distribution map(s):

Line and Valve Locations: Y ___ N ___ Comments: _____

Line and Valve Sizes: Y ___ N ___ Comments: _____

Line Materials: Y ___ N ___ Comments: _____

Fire Hydrant Locations: Y ___ N ___ Comments: _____

Dead-end Mains: Y ___ N ___ Comments: _____

Pressure-zone(s) Boundaries: Y ___ N ___ Comments: _____

Storage Facilities: Y ___ N ___ Comments: _____

Booster Pump Stations: Y ___ N ___ Comments: _____

Other: _____

Does the System retain records or documentation on the following:

O&M Distribution System repairs: Y ___ N ___

Leak Detection / Water Loss: Y ___ N ___ Water Loss last year: _____%

Construction Standards: Y ___ N ___

Are the Construction Standards followed: Y ___ N ___

Customer Complaints: Y ___ N ___

Other / Comments: _____

How is the number of bacteriological samples determined for new mains: _____

Does the system have a flushing program: Y ___ N ___ Frequency: _____

Does the system utilize pigging: Y ___ N ___ Frequency: _____

Does the system utilize directional flushing: Y ___ N ___ Frequency: _____

Are valves inspected and exercised: Y ___ N ___ Frequency: _____

Are Fire Hydrants inspected and operated routinely: Y ___ N ___ Frequency: _____

Are sampling hydrants available: Y ___ N ___ Number: _____

Piping Materials (list percentage of and # of feet)

C-900: _____ C-909: _____ Ductile Iron: _____ CIP: _____

Steel: _____ Lead: _____ AC: _____ Concrete: _____

Size of mains (record total feet or miles of main for each pipe size):

1.5" _____	12" _____	Other: _____
2" _____	14" _____	_____
3" _____	16" _____	_____
4" _____	18" _____	_____
6" _____	24" _____	_____
8" _____	36" _____	_____

Other / Comments: _____

Does the system have lead service lines existing: _____

If yes, does the system have a removal or replacement method: _____

Where does the systems responsibility for the distribution system end: _____

Where is the point of maximum detention time in the distribution system: _____

Historical maximum distribution disinfectant residual: _____ mg/L Minimum residual: _____ mg/L

Typical range of distribution disinfectant residuals: _____ mg/L

Disinfectant Residual Check: POE: _____ mg/L Avg. Detention: _____ mg/L Max. Detention: _____ mg/L

Other checks: _____

Frequency of checking distribution disinfectant residual: _____

Test Kit used: _____

Historical Maximum Distribution pressure: _____ psi Minimum pressure: _____ psi

Typical Distribution Pressure Range: _____ psi

System Pressure Check: High End: _____ psi Low End: _____ psi Avg. system: _____ psi

Are pressure readings routinely done in the distribution system: Y ___ N ___ Frequency: _____

Cross-Connection Control Program

Name of person responsible for the administration and enforcement of the CCC Program: _____

System Grade 6 Operators:

Name	License #	Expiration Date

Does the system have an adopted resolution, ordinance, or other enforceable instrument that assures the CCC requirements are being met: Y ___ N ___ Comments: _____

If yes provide the following information: Ordinance # _____ Other: _____

Source of Funding: _____

Responsibility of PWS: _____

Responsibility of Consumer: _____

Fines or penalties for noncompliance: _____

Does the system have an adopted plumbing code: Y ___ N ___

If yes, which code and date/version has been adopted: _____

Date(s) of last cross-connection survey: _____

How were (are) surveys distributed: _____

% of surveys returned: _____ % What actions are taken if surveys are not returned: _____

Have all high hazards been identified throughout the system: Y ___ N ___ Comments: _____

Have all hazards been identified throughout the system: Y ___ N ___ Comments: _____

Required testing frequency of devices: _____

Who does the testing for the system: _____ For the consumer: _____

What test equipment is available: _____

Are testing records for the last 5 years available: Y ___ N ___ Is testing current: Y ___ N ___

Does the PWS enforce the requirements of their cross connection control program: Y ___ N ___ Comments: _____

Is an on-going public information program being done: Y ___ N ___ Describe: _____

Comments: _____

GROUND AND ELEVATED TANK STORAGE FACILITIES

Facility Name	Type	Const. Mat.	Tank ht.	Over-flow ht.	Corrosion Control	Tank Capacity in gallons	Date of Last Inspection	Date Interior Painted	Interior Paint Type	Date Exterior Painted	Exterior Paint Type

For type: G = Ground Storage PB = Partially Buried B = Buried E = Elevated HP = Hydro-pillar UC = Uncovered Facility

Construction Material: C = Concrete S = Steel O = Other Describe: _____

Paint System Type: E = Epoxy G = Glass Coating W = Wax O = Other Describe: _____

Current condition of tank exterior(s): _____

Any Apparent Structural problems: Y ___ N ___ Comments: _____

Is there a routine inspection and cleaning program: Y ___ N ___ Comments: _____

Date of last tank cleaning: _____ Comments: _____

How is the water supply maintained with storage facilities out of service: _____

Are the facilities well maintained and secure: Y ___ N ___ Security Fence: Y ___ N ___ Locked Access: Y ___ N ___

Comments: _____

GROUND AND ELEVATED STORAGE TANK FACILITIES COMPONENTS

Facility Name	Roof Slope	Roof Leaks	Access Hatch Locked	Roof Vent Cond.	Level Measure	Tank Drain	Access Openings	Access Ladders	Valving Operable	Bypass Present/operable	Level Controls Type	Alarm System

S = Satisfactory U = Unsatisfactory N = Not present, but should be UI = Unable to visually see NA = Not Applicable

Are overflow pipes discharged to ground: Y ___ N ___ Does overflow pipe terminate 18" above ground level on a splash pad: Y ___ N ___

Are overflow pipes equipped with hinged and weighted flap cover: Y ___ N ___ Comments: _____

If yes, does flap cover completely seal overflow: Y ___ N ___ Comments: _____

If not, are they adequately screened: Y ___ N ___ Comments: _____

Overall Comments: _____

HYDROPNEUMATIC AND PRESSURE TANKS

Number of tank(s): _____ Total capacity in gallons: _____

Type: ___Air ___Air-Wafer ___Air-Diaphragm ___Air-Bladder

Installation Date(s): _____

Is tank located completely above ground: Y ___ N ___

Date of last internal inspection if applicable: _____ Problems noted: _____

Does Tank meet ASME Standards: Y ___ N ___

ASME PLATE INFORMATION: _____

Is an access port available: Y ___ N ___ Comments _____

Is there a functioning pressure relief: Y ___ N ___ Is there a functioning pressure gauge: Y ___ N ___

Is there a control system for water / air ratio: Y ___ N ___ Are air injection lines filtered: Y ___ N ___

Is there a sight glass or other water level indicator: Y ___ N ___ If other describe: _____

Are there valve or pump controls to prevent water hammer: Y ___ N ___

Overall condition of tank: _____

Comments: _____

PUMPS AND PUMP FACILITIES (Excluding Well Facilities)

Location / ID	Type	Application	Capacity	HP	Var. Speed	PM Prog.	Back-up Power	Comments
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

Type Codes: PDP = Positive Displacement Pump SR = Helical or Spiral Rotor C = Centrifugal Pump S = Submersible
 E = Ejector Pump RT = Regenerative Turbine VT = Vertical Turbine
 RP = Reciprocating Pump ES = End Suction (vertically split)
 SC = Split Case (horizontally split)

Comment Codes: 1 = Excessive Vibration 2 = Overheating 3 = Excessive Noise 4 = Producing Odors 5 = Other

Are all pumps operational: Y ___ N ___ Comments: _____

Is Redundancy provided and /or spare-parts on-hand for repairs: Y ___ N ___ Comments: _____

Are the pump facilities subject to flooding: Y ___ N ___ If yes what are the provisions: _____

Are all Drains and vents properly screened: Y ___ N ___ Comments: _____

Are the following items at all facilities adequate for operation: Lighting: Y ___ N ___ Signage: Y ___ N ___ Ventilation: Y ___ N ___

Heating: Y ___ N ___ Type of Heating: _____ Interior drainage: Y ___ N ___

Comments: _____

CONTROL SYSTEMS

Briefly describe the system controls: _____

Age of Control system or installation date: _____

Attach a simple diagram or schematic of the system if available

Mode of Communications: Phone: _____ Leased: _____ Owned: _____

Radio: _____ FCC License # _____ Exp. _____

Other: _____

Is there a back-up communications system: Y ___ N ___ Describe: _____

Is a UPS available at all sites: Y ___ N ___ Duration of back-up: _____

Are all control wires properly tagged and / or identified: Y ___ N ___

Frequency of datalogging: _____

Frequency of automatic reports: _____

Are all necessary control aspects of system operations included in the control system: _____

Who has the ability to make set-point changes: _____

Is system secure: Y ___ N ___ Comments: _____

Describe the alarm or call-out system: _____

Is a spare parts inventory maintained on-hand: Y ___ N ___ Comments: _____

Is lightning protection installed: Y ___ N ___ Type: _____

Comments: _____

FINANCIAL INFORMATION

Planned or actual for Year _____

Sources of Revenue: ___ User Fee ___ Flat Fee ___ Taxes ___ Other: _____

If Budget is available, attach a copy of the most current to this page, if not complete information below

Estimated Income / Revenue

- 1.) Taxes: \$ _____
- 2.) Flat Fee: \$ _____
- 3.) User Fee: \$ _____
- 4.) Connection Fee: \$ _____
- 5.) _____: \$ _____
- 6.) _____: \$ _____
- 7.) _____: \$ _____

Total Estimated Income: \$ _____

Reserve Accounts: \$ _____

Comments: _____

Surplus or Loss: _____

Intended Capital Improvements for next 3 years:

- 1.) _____
- 2.) _____
- 3.) _____
- 4.) _____
- 5.) _____

What does system do with income losses or surpluses:

Profit/Income And Surplus		Income Loss	
Deposit to general fund		Withdraw from emergency fund	
Deposit to water operating budget		Withdraw from enterprise fund	
Deposit to savings		Withdraw from reserve account	
Deposit to emergency funds		Borrow	
Deposit to enterprise fund		Delay paying bills	
Bond Interest / Pay-down Debt		Other:	
Needed equipment or supplies			
Other:			
		Has the system received State or Federal funding	
		Is the system eligible for State or Federal Grants	

Is an annual review, short term plan (2 years) and a long term plan (10 years) being performed: Y ___ N ___

WATER QUALITY MONITORING

Are there any current Administrative Orders for the system: Y ___ N ___ If yes describe: _____

Are the requirements of the order being followed: Y ___ N ___ If not, describe: _____

Are there any current violations for the system: Y ___ N ___ If yes describe: _____

Have the following Sample Plans been submitted to the State, and copies located at the system:

A.) Bacteriological Y ___ N ___ Comments: _____

B.) Lead / Copper Y ___ N ___ Comments: _____

C.) TTHMs / HAA5 Y ___ N ___ NA ___ Comments: _____

D.) TOC Y ___ N ___ NA ___ Comments: _____

E.) _____ Y ___ N ___ Comments: _____

Is the system current with the last 3 years monitoring requirements: Y ___ N ___ Comments: _____

Are the testing records available and accessible: Y ___ N ___ Comments: _____

What non-regulatory testing is routinely done: _____

Is testing equipment calibrated or standardized: _____

Are calibration records readily available: _____

Has the system established any Water Quality goals: Y ___ N ___ If not, why: _____

Is the system currently using or participating in any type of optimization programs: Y ___ N ___

Comments: _____

Inspector's Signature: _____

Report Received By: _____

Draft Findings Letter

RE: Sanitary Survey Findings and Compliance Plans:

On _____ (date) a Sanitary Survey was conducted for _____ (system name). During this survey conditions were identified that are in violation of the Title 179, NAC 2, Nebraska Drinking Water Regulations Governing Public Water Supply Systems, and /or conditions identified which can be improved by implementing HHSS-R&L recommendations.

All violations identified are listed in Section A of the attached Compliance Plan for this system. State recommendations for other conditions that were identified and involve non-regulatory issues are included in Section B of the compliance plan.

Please contact _____ (field rep.) at _____ (phone) or Scott Borman at (402) 471-0521 to schedule a meeting to discuss the findings of the Sanitary Survey findings and the resulting Compliance Plan(s). If the Public Water Supply wishes, arrangements can be made for State personnel and/or representatives of the State's 2% Technical Committee to present the findings of the Survey and Compliance Plan to the System's governing body. If this type of meeting is desired, again please contact one of the individuals to make the arrangements. Because the request for meetings must originate from the Public Water Supply, **these requests must be completed no later than 2 weeks from the date of this letter. Failure to request a meeting within this time frame will require that the Public Water meet the requirements shown in the next paragraph.** Requests for meetings after the two-week time frame will be honored; however, as stated previously, the requirements listed below will have to be met.

If no meeting is desired, the Public Water Supply **must submit in writing, no later than 30 days of the receipt of this letter**, a proposal of how and when the System will come into compliance with the Violations listed on the Compliance Plan. The attached Compliance Plan can be used to submit this information, and a follow-up inspection may be scheduled to verify that the compliance Plan is being followed.

Failure to request a meeting within the designated two-week period or to submit the required written proposal within 30 days of the receipt of this letter, may result in a Notice of Violation being issued for non-compliance and possible further legal action. In addition to this, if the Public Water Supply does not respond as directed and it holds other State issued permits as part of its business (for example Department of Agriculture, Liquor Control Commission, Board of Education etc...), those agencies will be notified of the Non-compliant status of the Public Water Supply.

If you have any questions please contact your HHSS-R&L Field Representative _____ (name) at _____ (phone) or Scott Borman at (402) 471-0521.

PWS Name _____

PWS ID# NE31 _____

**Nebraska Department of Health and Human Services Regulation and Licensure
Sanitary Survey Compliance Plan**

SECTION A VIOLATIONS

Violations of Regulatory Statutes	Required Corrective Action	Deadline for Completing Corrective Action	HHSS- R&L Use

Prepared By: _____ Date of Survey: _____ Date of Compliance Plan: _____

Page ____ of ____

PWS Name _____

PWS ID# NE31 _____

**Nebraska Department of Health and Human Services Regulation and Licensure
Sanitary Survey Compliance Plan**

SECTION B RECCOMENDATIONS

Identified Problem	Recommended Actions to Improve the System	Time suggestion for Implementing Recommended Actions	HHSS-R&L Use

Prepared By: _____ Date of Survey: _____ Date of Compliance Plan: _____

Page ____ of ____