

NEBRASKA

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DEPT. OF HEALTH AND HUMAN SERVICES



**NEBRASKA
PUBLIC WATER SYSTEM
CAPACITY DEVELOPMENT PROGRAM
Report to the Governor
September 2017**

***Pete Ricketts
Governor***

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EXECUTIVE SUMMARY

Access to a safe, reliable source of drinking water is arguably the most critical measure of Public Health to the citizens of the State of Nebraska.

The 1996 amendments to the Federal Safe Drinking Water Act (SDWA) require states to adopt a strategy for ensuring that new community and non-transient non-community public water systems (PWS) have the required technical, managerial, and financial capacities to provide safe and adequate water to their consumers. The amendments also require states to develop a strategy to help existing public water systems develop and achieve technical, managerial, and financial (TMF) capacity.

This 2017 Report to Nebraska Governor Pete Ricketts on the Public Water System Capacity Development Program (Report) summarizes activities completed, currently underway, and planned by Department of Health and Human Services- Division of Public Health (Department) Capacity Development (CD) program. In addition, this report fulfills the State's obligation under Section 1420(c) (3) of the SWDA to report the status of the program to the Governor, every three years by September 30th. Otherwise, Nebraska would realize a 20% reduction, or an estimated \$1.8M, of the Drinking Water State Revolving Fund federal capitalization grant.

Specifically, this report informs the Governor's Office of the program's effectiveness and progress made improving the TMF capabilities of the State's public water systems.

As we continue to provide assistance to public water supplies, we are constantly exploring new tools that will further enhance our ability to assist systems in need.

Although a wide variety of resources is available to be utilized by small water systems for development of capacity, it is acknowledged that the principal driving mechanism to an effective state strategy is the State's enforcement capability. The act of enforcement itself is a legitimate tool for the acquisition and maintaining of capacity by public water systems. When other avenues such as training, education and technical assistance do not achieve compliance with regulatory requirements, a consistent and fair-minded application of enforcement is imposed.

The Department is pleased to submit this report to Governor Pete Ricketts.

History of the Capacity Development Program

The Capacity Development Program was created under the Safe Drinking Water Act (SDWA) Amendments of 1996. The three major components of the Capacity Development Program are:

1. Section 1420(a) New Systems

Under penalty of Drinking Water State Revolving Fund (DWSRF) withholding, States must have a program established to:

"ensure that all new community water systems and non-transient, non-community water systems commencing operations after October 1, 1999 demonstrate technical, managerial, and financial capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect, on the date of commencement of operations."

2. Section 1420(c) State Capacity Development Strategies

Under penalty of DWSRF withholding, the State must develop and implement a:

"strategy to assist public water systems in acquiring and maintaining technical, managerial, and financial capacity."

3. Section 1452(a)(3) Assessment of Capacity

States may not provide DWSRF loan assistance to systems

- which lack the technical, managerial, and financial capability to ensure compliance; or
- if the system is in significant noncompliance with any drinking water standard or variance.

However, States may provide assistance if

- the use of such assistance will ensure compliance; and
- the system has agreed to make the necessary changes in operation to ensure that it has the technical, managerial, and financial capacity to comply over the long term.

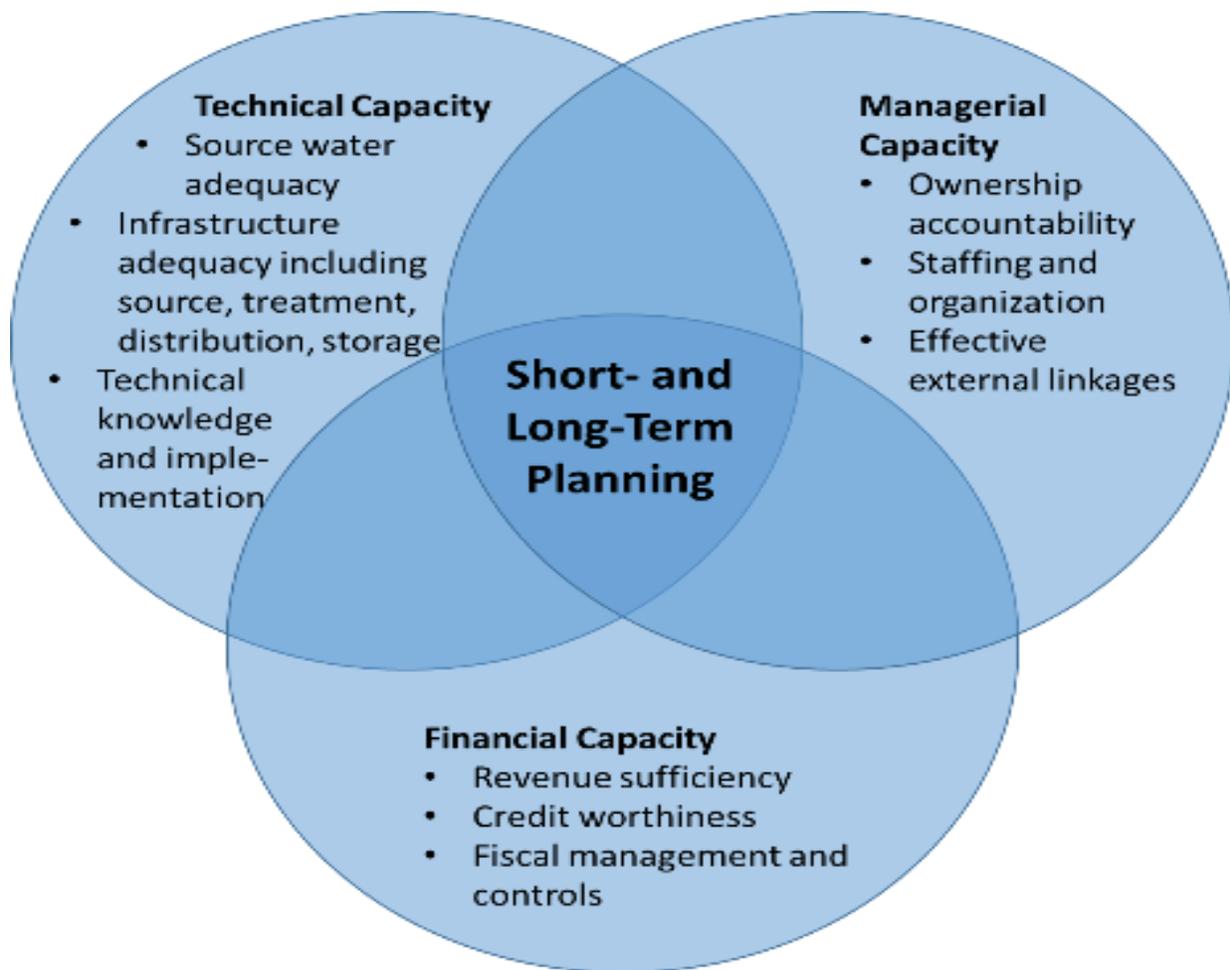
OVERVIEW OF CAPACITY DEVELOPMENT REQUIREMENTS

Capacity Development is a program to help drinking water systems improve their finances, management, infrastructure, and operations so they can provide safe drinking water consistently, reliably, and cost-effectively. More specifically, the federal SDWA capacity development provisions establish a flexible framework for the Department and water systems to work together to ensure the systems acquire and maintain the technical, financial, and managerial resources necessary to consistently achieve the health objectives of the 1996 SDWA.

Smaller systems often have more resource challenges than their larger counterparts. Today, challenges for small as well as large systems are daunting and usually include:

- Inadequate funds to upgrade or replace aging infrastructure;
- Lack of availability of a properly trained and licensed water operator;
- Lack availability of an adequate and safe supply of source water;
- Protection of the water source;
- The public's increasing demands for lower service costs; and
- Establishment of more enhanced and protective regulatory requirements and rules.

Capacity development and sustainable infrastructure efforts are focused on ensuring all water utilities are managed well today and are prepared to operate sustainably into the future. The bottom line is that capacity development is the key to compliance and sustainability for water systems large and small. Through capacity development water systems acquire and maintain adequate technical, managerial, and financial capabilities to enable them to consistently provide safe drinking water now and in the long term.



SDWA Definitions:

"Public water system (PWS)" is a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

"Community water system (CWS)" is a public water system that serves at least 15 service connections used by year-long residents or regularly serves at least 25 year-long residents of the area served by the system.

"Non-transient non-community water system (NTNC)" is a public water system that is not a community water system and that regularly serves at least 25 of the same persons over six months per year.

"Transient non-community water system (TNC)" is a non-community water system that does not regularly serve at least 25 of the same persons over six months per year.

In developing the regulatory requirements that directed each state's Capacity Development Strategy, EPA specified five elements the strategy must address. These elements include:

- A. How to identify systems in need of technical, financial and managerial assistance.
- B. Determining factors that enhance or impair a system's capacity development.
- C. Recommendations on how the state can use its authority and resources to help systems improve capacity.
- D. How to measure the success of a state's Capacity Development Strategy.
- E. Public involvement in its development.

Nebraska developed the State of Nebraska's Capacity Development Strategy with these elements in mind. The major objectives of our Capacity Development Strategy are to:

- Collect useful information about a system's capacity,
- Develop effective working relationships with the technical assistance providers in Nebraska,
- Educate the general public, owners and operators of systems and train system operators,
- Encourage land use planning to protect the quality of groundwater,
- Require the use of water meters on system wells and service connections, and
- Security for water systems.

All of these objectives are aimed at helping systems to provide an adequate supply of safe drinking water to its consumers on a continuous basis, to take care of its own problems when they arise, and to achieve compliance with all existing and upcoming regulations. A system's capacity should reflect a need for a minimal amount of reliance on outside sources of assistance for all but the most desperate of situations. As we continue to provide assistance to public water supplies, we are constantly exploring new tools that will further enhance our ability to assist systems in need.

Public Water System Information Collection

Beginning January 1, 2003, all Department field staff started entering all Sanitary Survey (SS)* deficiency data directly into the Safe Drinking Water Information System (SDWIS)/State database. This has greatly enhanced the Department's ability to identify, quantify and target common problems noted during surveys. A comparison of the survey information from January 1, 2014, until December 31, 2016, is shown on page 21 of this report.

*A Sanitary Survey (SS) is an on-site review of a public water system's water source(s), treatment, distribution system, finished water storage, pumps, pump facilities and controls, monitoring, reporting and data verification, water system management and operations, and operator compliance with state requirements. Sanitary Surveys are designed to identify conditions that may present a sanitary or public health risk. Community water systems and non-transient non-community water systems RSS's are conducted once every three (3) years. Non-Community water systems are required to undergo a Sanitary Survey every 5 years; these systems serve the public but do not serve the same population year-round.

The information collected consists mainly of technical issues centered on water system regulatory compliance. Managerial information is assessed by noting if management has taken the necessary steps to stay in compliance with the applicable regulations. Public water system financial data (operating budgets and water rates) are being gathered and analyzed to determine the financial capacity of the systems.

Complete managerial, and financial assessments of community water systems that are in line to receive financial assistance through the Drinking Water State Revolving Loan Fund for infrastructure improvements, are currently being done to create a benchmark to measure improvements. Once financial assistance has been given and the project has been completed and is in operation, a second assessment is completed to ascertain the sustainability of the system. Each assessment is presented at regularly scheduled Board/Council meetings.

STATE REVOLVING LOAN PROGRAM

The Nebraska Drinking Water State Revolving Fund (DWSRF) Program was established pursuant to the federal Safe Drinking Water Act of 1996. Neb. Rev. Stat. § 71-5314 to 71-5327 created the Drinking Water State Revolving Fund Act. The federal Safe Drinking Water Act and state statutes established the Drinking Water State Revolving Fund Program to provide loans at reduced interest rates to finance the construction of publicly and privately owned drinking water facilities. Instead of making grants to communities that pay for a portion of the building of drinking water facilities, the program provides for low interest loans to finance the entire cost of qualified projects. The program provides a flexible financing source which can be used for a variety of projects.

Loans made by the program must be repaid within 20 years, except that disadvantaged communities have 30 years to repay their loans. All repayments, including interest and principal, is used for the purposes of the program.

The program was capitalized by EPA by a series of grants starting in 1997. States are required to provide an additional 20% of the federal capitalization grant as matching funds in order to receive a federal grant.

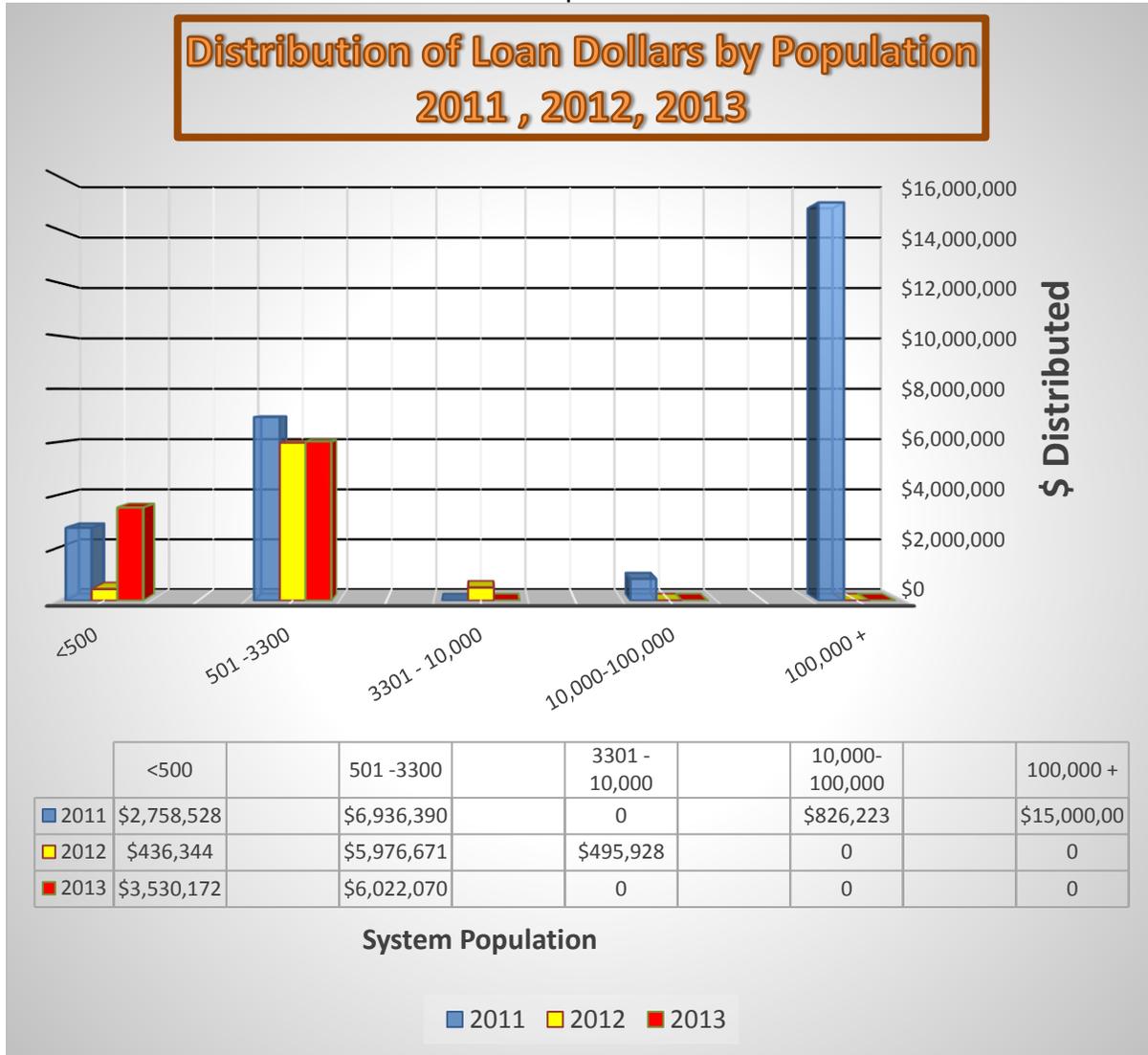
The program is administered by the Nebraska Department of Environmental Quality and the Department. The Department's primary activities with regard to the program include the prioritizing of projects for making of loans for facilities and the management and coordination of the program. The Nebraska Environmental Quality Council approves the rules and regulations and the program's Intended Use Plan.

Water systems needing funds to make capital improvements to their systems can apply for low or no cost loans from the Department. For all systems applying for DWSRF funds, an assessment is done on the system rating the TMF capabilities. Systems with insufficient TMF capabilities are required to address their deficiencies. These deficiencies are typically financial and/or the managerial aspects of financial planning. In such instances the system must develop proper managerial/financial planning. The systems typically also have technical deficiencies. However, all DWSRF reviews have shown the proposed project will address needed system technical improvements.

Since the DWSRF program began in 1998, more than two-hundred and fifty-eight (258) loans totaling in excess of two hundred and fifty-two \$252 million dollars have been disbursed for water

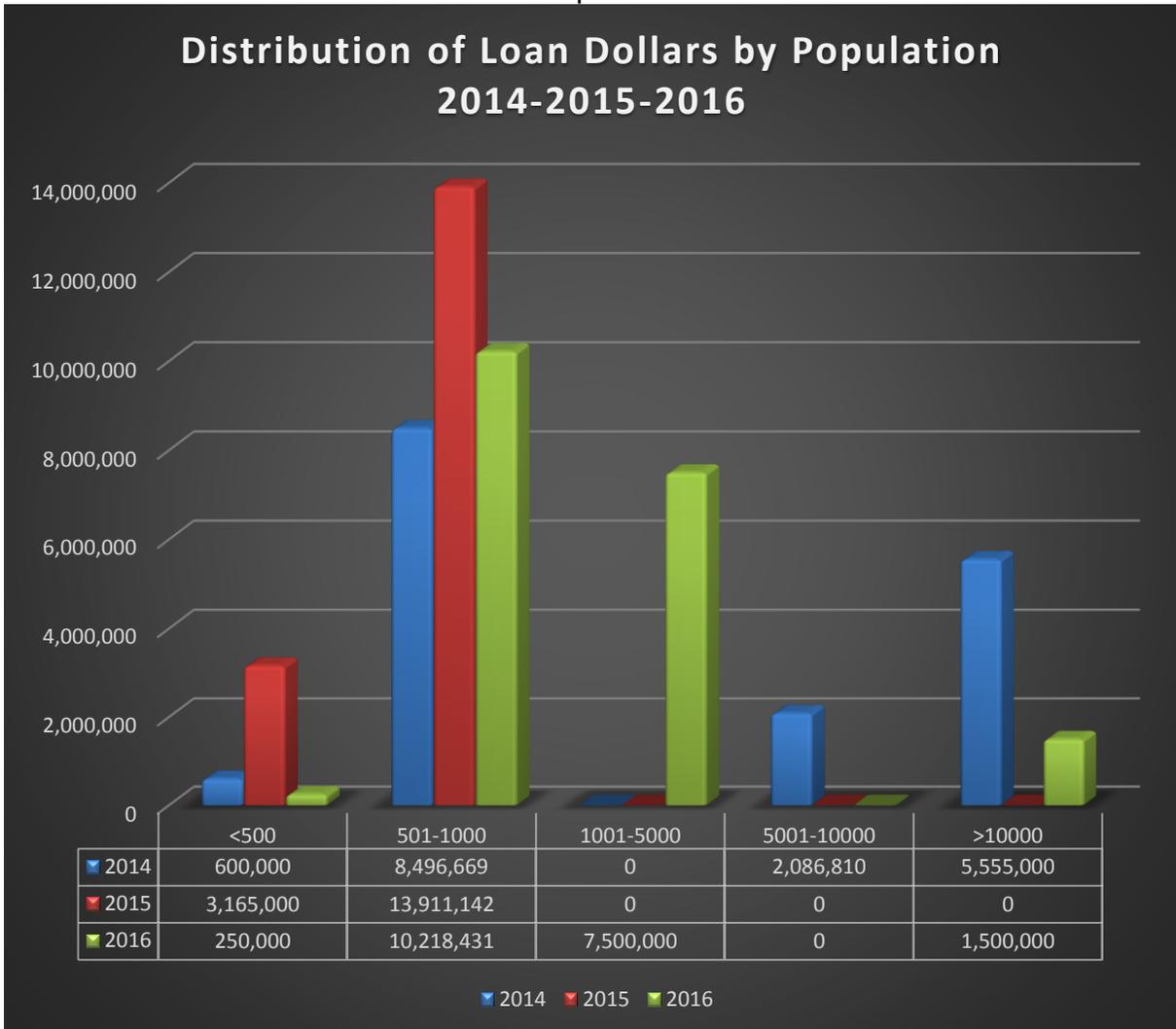
system upgrades in Nebraska. To date these funds have been distributed to a range of systems sizes; systems ranging from 65 customers to more than 100,000. Graph "A" illustrates the funding distribution to various system sizes that would have corresponded with the Governors Report of three years ago. Graph "B" shows the distribution of funding for the last three years.

Graph "A"



It should be noted that the EPA defines a small system as having a population of 10,000 or less (<10,000), and more than 97% of systems in Nebraska meet this definition.

Graph "B"



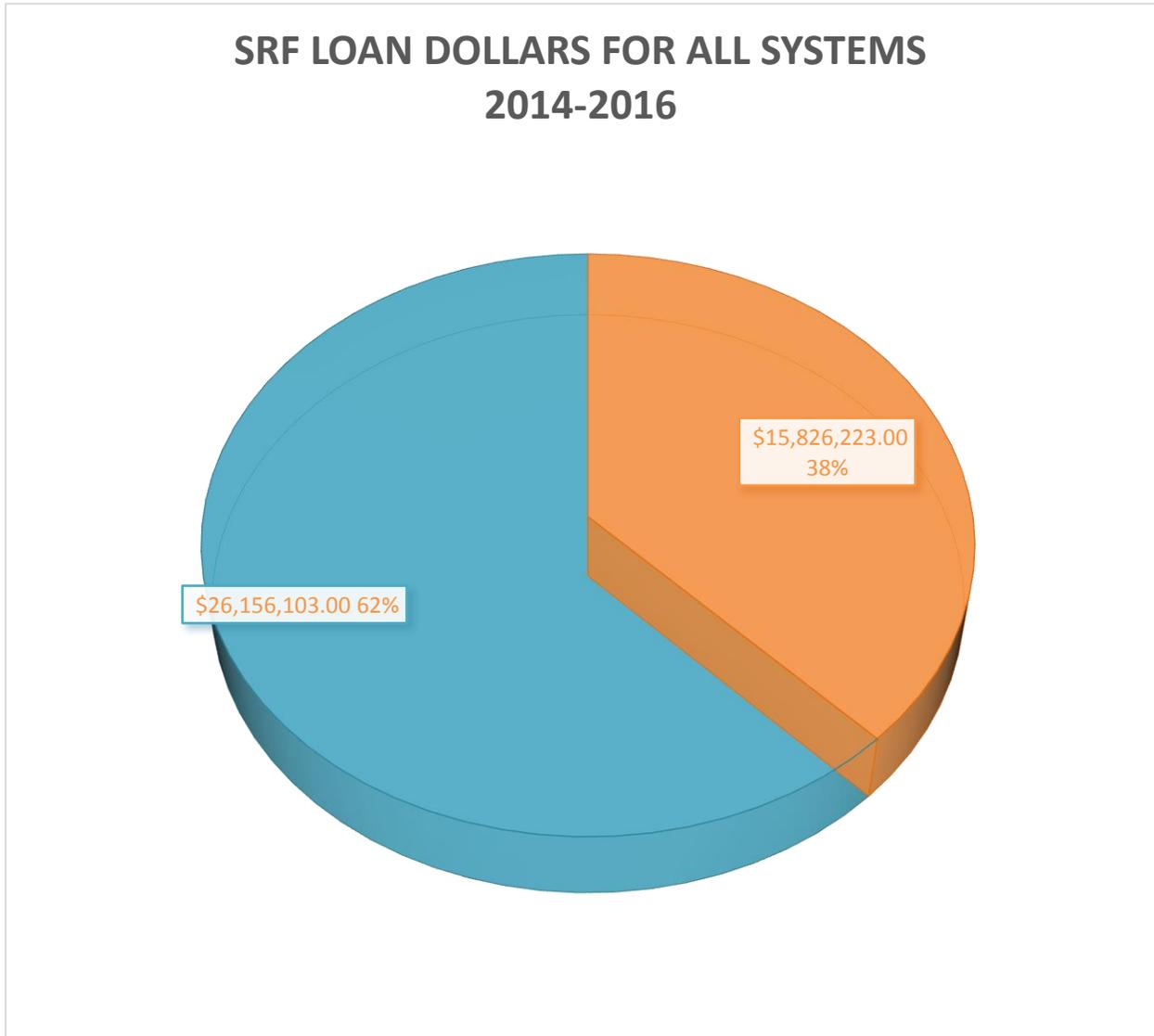
In the last three years there have been thirty eight (38) systems that have received loans from the DWSRF. Out of those there were thirty-six (36) systems that had a population of <10,000. Thirty three out of the thirty-six had a population under 3,300.

Loan percentages:

- 2014 = 54% of loans went to systems <10,000 – average population was 3,961
- 2015 = 100% of loans went to systems <10,000 – average population was 939
- 2016 = 92% of loans went to systems <10,000 – average population was 9,580

Graph "C" illustrates the percentage of funds disbursed to various sizes of systems with 38% going to systems over 10,000 population and 62% of the funds going to the small systems.

Graph C



In keeping with the Capacity Development Strategy for assisting with small systems (<10,000), the DWSRF dollars help keep water systems sustainable in rural Nebraska.

THE REQUIREMENTS FOR WATER METERS



This aspect of the Capacity Development Strategy was officially implemented with the fiscal year 2002 Drinking Water State Revolving Fund - Intended Use Plan. This requirement states that if a system uses DWSRF money for a project, it will be required to install water meters as part of the project if it is an un-metered system. This brought the Department in line with the requirements of the other lending agencies and bolsters the Department's stance that the installation of water meters has been constantly demonstrated to serve as a management and conservation tool without decreasing revenue. Without accurate meter readings it is very difficult to determine water loss or to develop a long-

term planning document.

At this time there is approximately 25% of the community water systems that do not have meters. The average population of these systems is 325. Eight systems have a population over 1,000 but under 3,300. The CD program does not consider these systems to have managerial or financial capacity due to the lack of ability to measure and equitably charge for the water being used by each individual customer.

“You can't manage it if you don't measure it”.

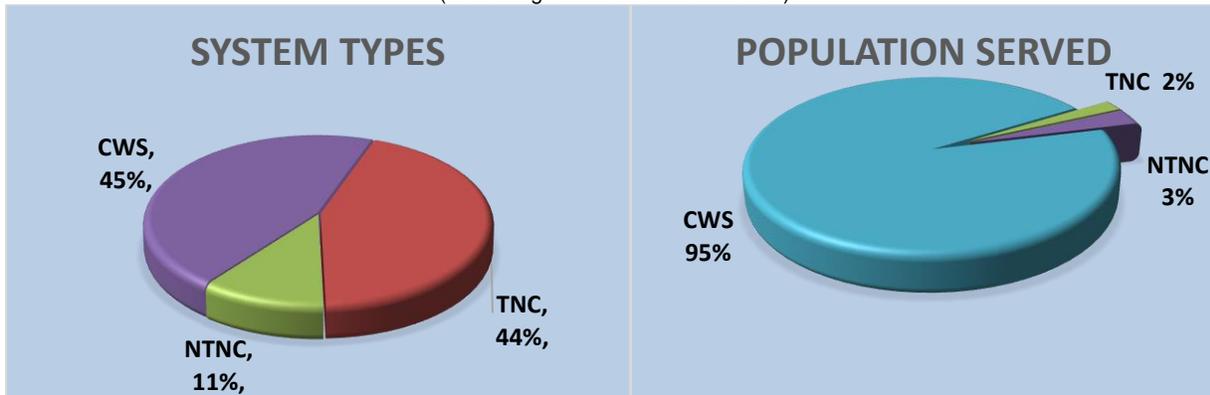
Profile for Nebraska Public Water Systems

The state regulates approximately **1,344** public water systems.
(The number of public water systems varies as new ones open and existing ones close.)

Population	CWS	NTNC	TNC	TOTAL SYSTEMS
<100	95	85	506	686
101-500	277	47	88	412
501-1000	99	5	2	106
1001-3300	88	8	0	96
3301-10,000	26	4	0	30
10,001-50,000	12	0	0	12
>50,000	2	0	0	2
TOTAL	599	149	596	1344

CWS = Community	599 systems
NTNC= Non-transient, non-community	149 systems
TNC= Transient, non-community	596 systems

(Percentages have been rounded off)



As you can see, 45% of all public water systems are community water systems (CWS) that serve 95% of the population. Forty-four percent of the systems are transient (TNC) systems, but they serve only 2% of the population. And 11% of the systems are non-transient non-community (NTNC) water systems that serve 3% of the population.

About 97% of Nebraska's community public water systems are small, serving 10,000 or fewer people (the vast majority are under 3,300 population). These systems are the main target of Nebraska's capacity development efforts because of their higher rate of non-compliance. Based on the past three years of enforcement records, 98% of the deficiencies issued by the state are directed to community water systems serving fewer than 10,000 people.

CAPACITY DEVELOPMENT FOR NEW PUBLIC WATER SYSTEMS

Nebraska’s **new-system** strategy is to prevent any new system from forming that doesn’t have the necessary capacity to serve its customers safe drinking water. This strategy is not as extensive as the existing-system strategy because we don’t see an appreciable number of brand new water systems being created.

As of October 1, 1999, all new community and non-transient non-community public water systems had to meet CD requirements. A new public water system applying for a “*permit to operate*” must demonstrate as part of their application that the water supply system will meet the minimum technical, managerial and financial capacity requirements of the State of Nebraska. The requirement for new community and non-transient non-community systems to obtain a “*permit to operate*” is to assure that the new systems possess adequate capacity before operating and to be assured that the systems will continue to possess capacity into the future. (See **Attachment “C”**) Table 1 shows the new systems that have been permitted over the last three years.

The Department issued *permits to operate* to eleven (11) newly constructed community and non-transient non-community public water systems in the period July 1, 2014, through June 30, 2016. Of the eleven (11) systems subject to Title 179 NAC 2-015 Capacity Development regulations, eight (8) newly constructed systems are non-transient non-community systems and three (3) are community systems.

Table 1
Permits to operate new public water systems July 1, 2014 – June 30, 2016

	I.D. Number	System	Type	Date Permit Issued
1	NE3121396	CENTRAL VALLEY AG – ROYAL	NTNC	8/14/2014
2	NE3121398	BAYER CROP-SCIENCE WHEAT BREEDING STATION	NTNC	11/4/2014
3	NE3121399	ORTHMAN MANUFACTURING SOUTH	NTNC	12/4/2014
4	NE3121366	ALTEN MEAD (“Proposed” System since 2012), until NOW	NTNC	4/21/2015
5	NE3121397	CENTRAL VALLEY AG 81-20 (RANDOLPH)	NTNC	4/22/2015
6	NE3121405	COTTONWOOD INC	NTNC	4/28/2015
7	NE3121408	KZCO	NTNC	6/9/2015
8	NE3121428	ARTHUR CO DIST #500 –MIDDLE SCHOOL	NTNC	12/1/2015
9	NE3121429	NORTH PLATTE PATRIOT PARK	COMM	12/9/2015
10	NE3121434	WINNEBAGO TRIBAL FACILITIES- MISSION DRIVE	COMM	1/19/2016
11	NE3121445	PAWNEE CO RWD #2	COMM	6/17/2016

CAPACITY DEVELOPMENT STRATEGY
FOR
EXISTING PUBLIC WATER SYSTEMS

Nebraska's existing-system strategy focuses on working with challenged water systems that lack adequate capacity through a variety of assistance efforts including reduced term loans, planning loans, and user rate analysis. The reduction of federal dollars has a direct impact on the amount of assistance the Department can provide, either through reduced cost loans or outreach and assistance programs. Systems that lack adequate capacity run the risk of service disruptions, poor quality water, upset customers, and the inability to make necessary improvements or plan for future needs.

Nebraska's Capacity Development Strategy for Existing Public Water Supply Systems was implemented on January 1, 2001. A copy of the revised strategy is included with this report as "Attachment D".

Public water systems provide water to approximately 80% of the 1.9M people of Nebraska. Private domestic wells provide water for other Nebraskans.

The trend in Census reporting shows that populations are shifting away from small towns to the larger more viable communities. This is putting an extra burden on those smaller communities to comply with regulations to continuously provide clean drinking water to their customers. The tax and/or rate base for these small systems is dwindling to a point where they do not have enough customers to be able to become or remain a viable self-sustaining water system. This situation leads to one obvious conclusion: these small systems are going to become or remain an enforcement problem for the state. This is based on the realization that these systems, even though they may have the necessary managerial and technical capacity, will probably not be able to develop enough financial capacity to "pay their own way." Without the financial capacity they cannot keep qualified operators and the technical operation of their systems will suffer as a result.

In many small communities the lack of forward looking leadership from board members has put those water systems in jeopardy of failing. Unwillingness to raise water rates means that proper maintenance and repairs are not being accomplished. This poses a constant threat of a disruption in their customers' drinking water supply. Any such disruption could threaten customers' health and welfare and be an impediment to economic survival. Inevitably, not all water systems will survive.

Information was gathered through sanitary surveys, system assessments, 2% List and a program that was developed for NDEQ from the Wichita State University Environmental Finance Center – Assessing Wastewater Infrastructure Needs (AWIN). The AWIN Sustainability Model is a probability model that evaluates Nebraska communities' sustainability risk. This model determines the sustainability risk of a community's ability to pay for infrastructure needs in the future by analyzing individual community's population trends, economic status and resources.

This sustainability model was developed from the 2000 and 2010 Census, 2008-2012 American Community Survey and the Wichita State University Finance Center decision-making tool.

By this baseline information being gathered – it was ascertained that Nebraska has approximately 33% (156) of community water systems that are likely unsustainable.

In October of 2014 a sustainability survey was added to the SS form for making a quick analysis of the water systems having a sanitary survey preformed. (See Attachment “F”) This meant that the sustainability of a system would only be measured once every 3 years but we would begin developing a baseline for each community system. The survey had a possible 145 points. Survey responses with 100 points were said to have a “passing” grade. Those systems that were scored with less than 100 points would be categorized as a high priority systems that may need focused assistance to build their sustainability. So far the average for scoring of all systems that have had a sustainability survey completed (405 systems with 322 [80%] participation) is 91

The vast majority of troubled systems are in the “less than 500 population” category. The CD program is dedicated to helping those receptive systems in attaining their TMF capacity to have a viable water system for their customers. Continued program funding is necessary to maintain TMF support for these systems.

CAPACITY DEVELOPMENT COLLABORATION WITH OTHER ORGANIZATIONS

The Department works with several technical assistance organizations to assist Nebraska’s public water systems in acquiring capacity. Monies from the 2% Set-aside of the Drinking Water State Revolving Loan Fund (DWSRF) have been utilized to fund these contracts. The 2% set-aside is designated specifically for technical assistance capacity development activities while the other set-asides (4%, 10% and 15%) are designated for other activities (Attachment “B”).

The following entities are all considered members of Nebraska's 2% Technical Assistance Team. It is called the 2% Team because many of the activities of this group are funded through use of the DWSRF 2% set-aside. At one time or another, they all have had contracts with the Department.

- The Nebraska Rural Water Association (NeRWA),
- The Midwest Assistance Program (MAP),
- The League of Nebraska Municipalities (LoNM),
- The Nebraska Section American Water Works Association (NSAWWA), and
- The Central Community College (CCC).

The underlying goal of all of these entities is the same: to help systems develop capacity and provide valuable educational opportunities for water system owners, board members and operators. A brief description of each of the 2% Team members is in “Attachment E”

ASSISTANCE TO WATER SYSTEMS

All systems, regardless of size, are provided assistance by State staff, whether it be from the CD program or field personnel. This assistance includes sanitary surveys, site visits, training sessions, and meetings with water system operators, managers, owners, and board members.

The field staff conduct on average, approximately 400 sanitary surveys per year. In doing the sanitary surveys they check for compliance and provide advice or assistance. System assistance with field staff is highly effective with receptive water systems.

Some systems have unique deficiencies that are specific to their system, some have deficiencies that are common to numerous systems, and some have both.

Examples of site-specific deficiencies are:

- ✚ No method to measure well production
- ✚ Failure to inspect storage facilities as required
- ✚ No ability to apply emergency disinfection
- ✚ Failure to have a licensed operator available
- ✚ No updated or current map of system

Staff can assist water systems in addressing site-specific deficiencies through:

- ❖ Assigning 2% Team members to assist
- ❖ Providing educational information
- ❖ Assisting with training sessions

Examples of common deficiencies:

- ✚ No long-range financial planning (2 and 10 year plans)
- ✚ No preventive maintenance program
- ✚ Failure to require cross-connection surveys
- ✚ Failure to submit written response within 30 calendar days
- ✚ Failure to meet on-going cross-connection public education requirement

Staff can assist water systems in addressing common deficiencies through:

- ❖ Workshops
- ❖ Group training sessions
- ❖ Guidance documents

In addition, all of the 2% Team provides assistance.

Public Water System Training

Public water system training is a primary component of the strategy. This is the element where the Department must succeed in order to ensure the long-term viability of Nebraska's public water supply systems.

Training is separated into two distinct categories. The first section addresses system operator training strategies and efforts the Department is making to enhance public water systems' technical and managerial capacity. The second section addresses system owner training strategies and describes how the Department is working to increase system managerial and financial capacity.

A sustainable public water system is one where the operator is identified as a water system asset, similar to how the physical components of the system are identified. One very substantial difference is that the value of the operator will appreciate, while the value of physical components depreciate over the same time span. That operator value is institutional knowledge gained from experience, education and training obtained over time. The practice of water operator succession planning is a key element for maintaining continuity in operations and an acceptable level of service to water system consumers.

Community and non-transient non-community public water systems are classified as Class I (highest classification) through IV (lowest classification) depending on the water treatment provided and population served. All public water systems are required to obtain the services of an operator holding a valid license equal to or greater than the classification of the water system.

The Department offers four (4) different grades of water operator licenses for operators of community and non-transient, non-community public water systems. Issuance of a water operator license for any grade level requires documentation of minimum education and experience requirements applicable to the license grade, and successful completion of an examination.

While members of the Training Coalition provide the majority of training for water operator continuing education purposes, the Department conducts all of the training courses associated with initial operator licensing for Grades I through IV. The courses vary in length from two (2) days for a Grade IV Water Operator Course (entry level) to four and one half (4.5) days for Grades III, II, and I (highest level). At the conclusion of each training course, a licensure exam is offered to those individuals that meet the minimum education and experience requirements. Grade IV training is also offered by the Department through a correspondence course by which the student completes a series of 10 lessons and then takes the licensure exam. These individual exams are offered on one day every month in each field office. The training course curriculums are designed so that the subjects being covered are representative of the class of systems that a particular level of license would allow a person to operate.

On an annual basis, the Department offers six Grade IV courses, two Grade III courses and two courses for combined Grade I and II Course. The location for these courses in

Nebraska is based on identified need within the state. The number of water operator licenses issued per grade level for calendar years 2014 through 2016 is as follows:

Number of Water Operator Licenses Issued 2014–2016

YEAR	Grade I	Grade II	Grade III	Grade IV
2014	2	7	26	104
2015	2	2	19	107
2016	1	3	19	122

With the combined efforts of our Training Coalition, Technical Assistance Providers, judicious efforts in enforcement, and Department staff responsible for water operator education courses, the number of systems operating without a licensed operator has been minimal. At any given time during the year, that number averages around two (2) to three (3) systems operating without a licensed operator. This number is largely due to personnel turnover at small community and non-community systems

Public Water System Owner Training

The Department fully recognizes that the weakest link in developing a public water system’s capacity is owner ignorance/apathy. Consequently, the Department places a very high emphasis on strengthening this link.

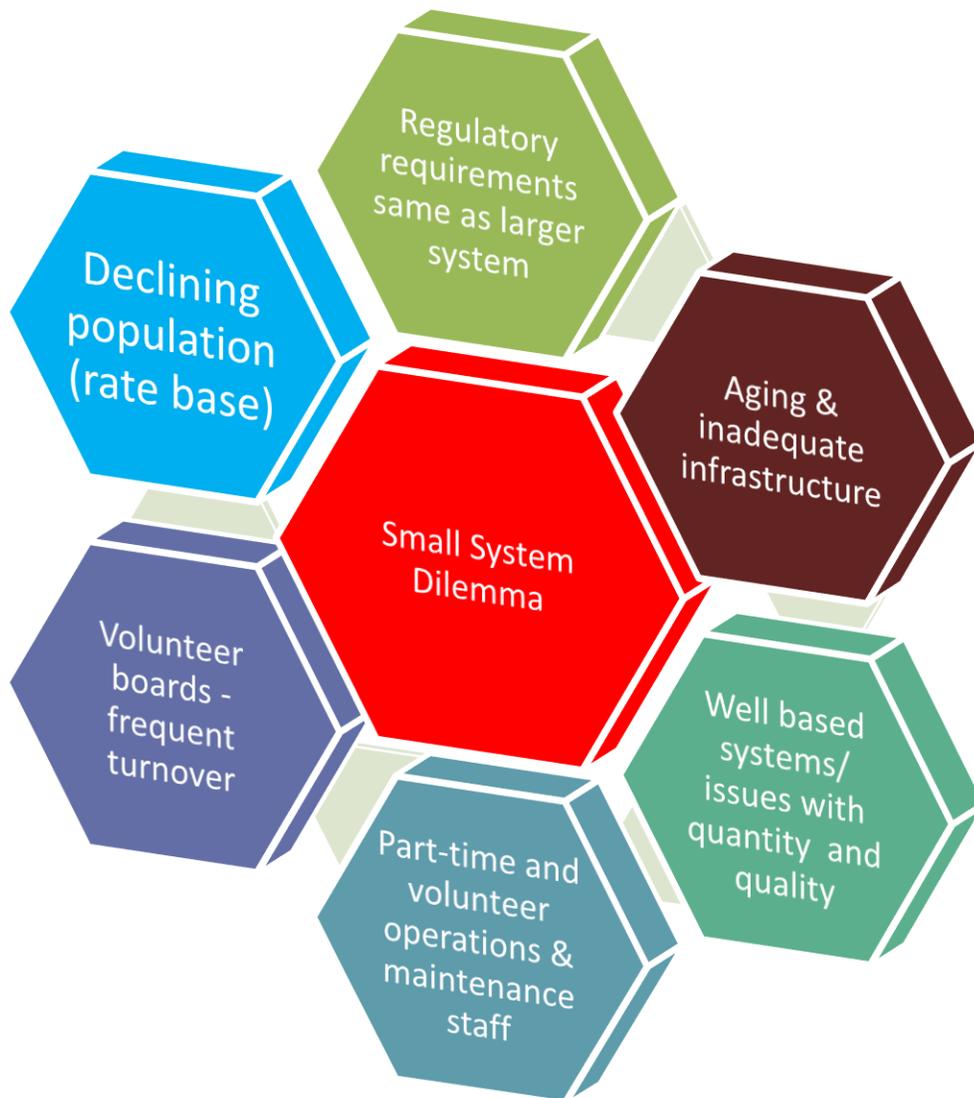
After several sanitary surveys are conducted in a confined geographic area, the 2% Team schedules a training session in that area and offers instruction to Board/council members and Owners of community water systems (CWS). After that, if needed, a system-by-system approach is used, depending on the type of training needed, to address specific problems.

Members of the 2% Team conducted twenty-five (25) workshops throughout the state with an average of six persons in attendance. The need to encourage more owners to attend training is critical.

In keeping with the Capacity Development strategy, the need to improve management knowledge of drinking water regulations and operations is a must.

Hardships faced by our small water systems today

The overall goal of capacity development is to improve the rate of compliance and long-term sustainability of water systems. Nebraska's program is focused on water systems serving communities with fewer than 10,000 people, because they have the greatest challenge in meeting the public health and reporting requirements of the SDWA.



Systems that lack adequate capacity run the risk of service disruptions, poor quality water, upset customers, and the inability to make necessary improvements, or plan for future needs.

MEASURING THE SUCCESS OF THE CAPACITY DEVELOPMENT STRATEGY

A. In comparing data, the 2013 Governors report has shown a leveling off of deficiencies, however in general the Department believes that our Capacity Development Strategy is successful.

The following figures give a comparison between calendar years 2014, 2015 and 2016 with respect to the number of RSS performed and the severity and number of deficiencies found.

CWS – Community Water System

NTNC – Non-Transient Non-Community Public Water Supply

TNC – Transient Non-Community Public Water Supply

RSS – Routine Sanitary Survey

Significant deficiency - This level indicates obvious technical deficiencies of an immediate nature that have a potential or direct threat to public health.

Minor deficiency - This classification is intended for those deficiencies that can be indicative of potential technical deficiencies.

	2014	2015	2016
<i>Total Number of RSS</i>	378	415	435
CWS	191	208	205
NTNC	47	56	48
TNC	140	151	182
<i>Total Follow-Up RSS</i>	42	30	59
CWS	29	22	38
NTNC	6	4	0
TNC	7	4	21
<i>Total Number of Deficiencies</i>	1004	1158	1122
CWS	565	748	661
NTNC	182	124	99
TNC	257	286	362
<i>Significant vs. Minor Deficiencies</i>			
Total Significant Deficiencies	737	821	817
Total Minor Deficiencies	267	337	305
<i>Significant vs. Minor Deficiencies</i>			
CWS Significant	397	524	461
CWS Minor	168	224	200
NTNC Significant Deficiencies	143	97	75
NTNC Minor Deficiencies	39	27	24
TNC Significant Deficiencies	197	200	281
TNC Minor Deficiencies	60	86	81
<i>Average Number of Deficiencies per RSS</i>	2.7	2.8	2.6

B. The Department has made a strong commitment to reduce the number of overdue deficiency corrections by systems. Weekly updated overdue compliance lists are distributed to the 2% Technical Assistance Team to keep them abreast of the systems that have been added to or removed from the list. The reason for supplying this list to the 2% members is so they may provide on-site technical assistance to these systems to help correct their deficiencies. In 2014, on average, there were thirty-eight (38) systems on this list at any given time. In 2015 the average number of systems on the list was twenty-three (23), with an average of thirty (30) in 2016. Some of the systems on the list have been included on more than one list during the year.

Number of Systems on Overdue Compliance List/month

Governors Report 2008		Governors Report 2011		Governors Report 2014		Governors Report 2017	
	Number of Systems		Number of Systems		Number of Systems		Number of Systems
2005	86/mo.	2008	36/mo.	2011	40/mo.	2014	38
2006	81/mo.	2009	46/mo.	2012	34/mo.	2015	23
2007	53/mo.	2010	44/mo.	2013	36/mo.	2016	30
Avg. over 3 yrs.	<u>73/mo.</u>	Avg. over 3 yrs.	<u>42/mo.</u>	Avg. over 3 yrs.	<u>38/mo.</u>	Avg. over 3 yrs.	30/ mo.

These tables show a 58.9% decrease, from the 2008 Report to the Governor to the 2017 Report. The difference from the 2014 Report and the 2017 Report has continued to decrease by 21% in the number of systems that have had deficiencies that put them on the overdue compliance list.

Over the first three-year period of the Capacity Development program, (2003-2004-2005) an average of 1,282 significant deficiencies were recorded along with an average of 415 minor deficiencies.
Compare that with the last three years (2014-2015-2016) of an average of 752 significant deficiencies and 308 minor deficiencies. It shows -41.3% decrease of significant deficiencies along with a decrease in minor deficiencies of -25.7%.

- C. Another statistic used to measure success of Nebraska’s public water system Capacity Development Strategy is sanitary survey compliance follow-up. DHHS DPH field inspectors also perform follow-up sanitary surveys on at least 5% of all community RSS done every year to verify that the identified deficiencies have been corrected or to check on systems that may not have responded to the deficiency letter that is sent to the system after the survey is completed.

Percent of Follow-up Surveys Completed

2014 Follow-up 11%	2015 Follow-up 10.7%	2016 Follow-up 13.5%
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Going above and beyond to follow up on systems that have deficiencies - field personnel assist with problems and suggest remedies to help alleviate struggles that systems face.

In comparing data, the 2014 Governors report has shown a leveling off of deficiencies, and the 2017 Report shows that those levels of deficiencies have remained low compared to the beginning of the program. In general the Department believes that our Capacity Development Strategy is successful.

CONCLUSION

The Department, and its partners, have worked hard to implement Nebraska's Public Water System Capacity Development Strategy, and believe the intent and goals of the strategy are being met. The statistics show the strategy's positive impact on developing and enhancing the technical, financial, and managerial capacity of Nebraska's public water systems. Furthermore, public water systems are being provided the information and tools necessary to maintain compliance with current, and future regulatory requirements.

The Drinking Water Program, in collaboration with its partners, will continue to advance the improvement in the technical, managerial, and financial capacity of public water systems, enhancing Public Health for the citizens of the State of Nebraska. That is the ultimate measurement of success.

This report will be disseminated to the public via the Department's website (<http://www.dhhs.ne.gov/drinkingwater>). We will also supply the major media sources with information about the website and the fact that this report may be obtained there. A hard copy will be maintained at the Department offices at the Nebraska State Office Building, 301 Centennial Mall South, Lincoln, Nebraska. A copy of this report in its entirety shall be provided to any group or individual calling or writing the Department to request a copy.

Scott Sprague
Capacity Development Coordinator

Sample of SUCCESS STORIES

Village of Garland – Water System Improvements

The Village's water system was undersized, and the majority of which was constructed in the 1920's, reportedly with oakum gasketed joints. There were several sections of the system that experienced repeated breaks, and in recent years, the system had measured an unacceptable amount of unaccounted for water produced. Numerous alternatives for improving the water system were evaluated, the result was a project to replace a significant portion of the distribution system, miscellaneous well improvements such as updating electrical service, heating, etc., a full repainting off the Village's water tower, including lead-paint removal/disposal, and upgrading to a radio-read water meter system.

Village of Lindsey - Blending Well and Transmission Main

The Village was a two well public water system. The primary well was in operable condition, but the backup well was previously placed on emergency use only status due to high Nitrate levels. Then in November 2011 the Village was issued an Administrative Order for Nitrate violations of the Maximum Contaminant Level as primary well as high as 12.4 mg/L, above the drinking water standard of 10, supporting the recommendation in the engineering report that Lindsay construct a new water well. From an evaluation of projected water supply needs of the existing system users, the new well was connected to the existing supply wells through a transmission main to allow for blending.

Village of Wood Lake - Water Tower Rehabilitation

A water system evaluation confirmed the need for a rehabilitation of the Village's 40,000 gallon water tower, including repair of roof eaves, interior and exterior repainting, as well as the installation of safety rails, ladders and a new access hatch. The project likely addressed recurring Administrative Order conditions as the system's supply wells, distribution system and service meters were recently replaced in 2002, leaving only the tower as a potential pathway for coliform contamination through infrastructure.

Village of Haigler – Point of Use Treatment and Water System Improvements

The Village of Haigler installed Point-of-Use treatment in their public water system to remove Arsenic from their water supply. In addition, the community repainted their water tower, relined an existing supply well and replaced several blocks of water main. Historically, Arsenic concentrations in the Village's supply wells had ranged up to 25.1 µg/L, consistently detected above EPA's Maximum Contaminant Level of 10. The Village has received an exemption from the Arsenic drinking water standard that expired in January 2015. As a result, the Village's engineer completed a study that included evaluating a new water source and numerous treatment alternatives. Upon an evaluation of costs, Point-of-Use treatment was the most affordable of the return to compliance alternatives considered.