

**KANSAS PUBLIC WATER SUPPLY
CAPACITY DEVELOPMENT PROGRAM**

REPORT TO THE GOVERNOR

September 15, 2014



Kansas Department of Health and Environment
Division of Environment
Bureau of Water
Public Water Supply Section

1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612
(785) 296-5514

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INTRODUCTION

On August 6, 1996, President Bill Clinton signed PL 104-182, more commonly known as the Safe Drinking Water Act (SDWA) Amendments of 1996. Section 1420 of the SDWA required states to prepare two strategies to assist public water suppliers in achieving technical, financial and managerial capacity. One strategy was prepared for new system permitting. The second was prepared to help existing systems. The Kansas Department of Health and Environment (KDHE) is the primacy agency responsible for preparation and implementation of the Kansas Capacity Development strategies.

The New Systems Capacity Development Strategy was submitted to the U. S. Environmental Protection Agency (EPA) and subsequently approved in September 1999. The New Systems Strategy ensures that KDHE will not issue a permit to a new system until it has demonstrated the technical, financial and managerial (TFM) capacity to comply with drinking water regulations for the protection of the public health.

The Kansas Capacity Development Strategy for Existing Systems was submitted to the EPA in August 2000 and was approved in September 2000. The SDWA requires the head of the state primacy agency to submit to the Governor 2 years after adoption of the strategy and every 3 years thereafter, a report on implementation and efficacy of the state strategy. This report is submitted to the Governor to comply with the 3-year reporting requirement. Failure to prepare a strategy or submit the required reports may result in a 20% reduction in the capitalization grant from EPA for the drinking water revolving loan fund.

WATER SYSTEM CAPACITY

Water system capacity is the ability to plan for, achieve, and maintain compliance with applicable drinking water standards. Capacity consists of three elements: Technical, Financial, and Managerial (TFM). Technical Capacity or capability is the physical and operational ability of a water system to meet SDWA requirements, including the adequacy of physical infrastructure, technical knowledge and capability of personnel, and adequate source water. Financial Capacity or capability is the ability of a water system to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with SDWA requirements. Managerial Capacity or capability is the ability of a water system to conduct its affairs in a manner enabling the system to achieve and maintain compliance with SDWA requirements, including institutional and administrative capabilities. Properly managed systems have governing boards or authorities that are actively involved in oversight of system operations, while at the same time avoiding micromanagement.

Capacity development is the *process* of water systems acquiring and maintaining adequate technical, financial and managerial capabilities to ensure that systems consistently achieve the public health protection objectives of the 1996 Safe Drinking Water Act and to address both immediate and long-term challenges.

CAPACITY ASSURANCE – NEW PUBLIC WATER SUPPLY SYSTEMS

New System Permitting Overview

Under the 1996 amendments to the SDWA states are required to insure that new community and new non-transient, non-community (NTNC) public water supply systems have the technical, financial and managerial capability to meet current and future SDWA requirements. The KDHE's New System Permit Application consists of two parts. Part 1 is the engineering and design component, which is reviewed and approved by the Engineering and Permitting Unit. Part 2 of the permit application is the technical, financial and managerial capacity assurance component. Upon approval of Part 1 and the budget section of Part 2, a conditional permit or a letter of approval is issued authorizing construction of the public water supply system.

Before the system begins operation, the remaining elements in Part 2 of the application must be completed and approved. A final inspection must also be conducted and approval to initiate operations must be granted by KDHE.

New System Implementation and Program Efficacy

The Capacity Assurance Strategy for new systems includes a review and evaluation component the KDHE uses to determine if the application and permitting process is effective. KDHE employs the EPA's Enforcement Response Policy (ERP) and Enforcement Tracking Tool (ETT) to analyze the success of the New System Capacity Assurance Program. According to the ERP, any system with a score of 11 or more points using the Enforcement Tracking Tool (ETT) is considered to be in significant non-compliance. Any new system with 11 or more points, receives a special review to ascertain why the non-compliance is occurring. KDHE evaluates whether the system's non-compliance is because of any short-coming in the new system permitting process or whether the non-compliance is due to other reasons, such as not following a proposed budget or providing proper training for the system's certified operator. During the period October 1, 2011 through September 30, 2014, one of the 4 new systems permitted received a score >11. Technical assistance was provided to bring this system back into compliance, resulting in removal from the ETT list.

CAPACITY DEVELOPMENT STRATEGY FOR EXISTING PUBLIC WATER SUPPLY SYSTEMS

Existing System Strategy Overview

In March 1999, KDHE convened the Kansas Capacity Development Workgroup to assist in the preparation of the *Report of Findings* for the Kansas Capacity Development Strategy. Thirty drinking water stakeholders from across the State were invited to participate in the Workgroup. The Workgroup met 8 times during 1999 and 2000 and developed 15 recommendations for the Department to consider in the State Strategy.

All 15 recommendations have been implemented or amended. The changes are documented in Amendments 1 and 2 of the Capacity Development Strategy for Existing Water Supply Systems. The Report of Findings, the Capacity Development Strategy for Existing Public Water Supply Systems and the amendments are available for review on the Capacity Development Webpage: <http://www.kdheks.gov/pws/capdev.html>. Detailed information related to Program implementation is available in the annual program reports, also located on the Capacity Development Program webpage.

The Kansas Capacity Development Program is considered a national leader in developing and implementing innovative tools and programs to help water systems achieve and maintain TFM capacity. Several states have used the Kansas Capacity Development Survey as a model to develop similar surveys for use in evaluation of their state programs. In addition, A.M. Kan Work, an asset management tool, has been used by many states as well as in South Africa to help water systems develop and implement asset management plans for their utilities. The program manager is routinely asked to provide presentations at national meetings and workshops, and serves on the US EPA National Capacity Development Workgroup.

Existing System Strategy Review and Modification

Periodic review and modification of the Strategy for Existing Systems is vital in keeping KDHE's Capacity Development Program current and relevant to the needs of Kansas public water supply systems. KDHE periodically convenes the State Capacity Development Workgroup to provide updates on Strategy implementation.

These meetings provide an opportunity for the stakeholders to review KDHE’s implementation activities and offer advice on changes that may be needed. The Strategy has been amended twice since the initial EPA approval in 2000. Amendment 1 adopted in 2007, primarily clarified language to insure that implementation activities were consistent with the Strategy as applied to agency responsibilities. The most recent change was adopted in Amendment 2 during State Fiscal Year 2014, and added two new programs – the Area Wide Optimization Program (AWOP) and the Drinking Water Protection Program (DWPP).

Efficacy of Existing System Strategy

The Capacity Development Workgroup recommended that KDHE use a water system survey to measure improvements in water system capacity. Prior to the 2002 Report to the Governor, KDHE developed and completed the first Capacity Development Survey. The 2002, 2005 and 2008 surveys consisted of hardcopy forms mailed to each water system and then entered by hand into a KDHE database. An electronic survey was under development during 2011, therefore a survey of water systems was not conducted for the 2011 Report to the Governor. In February 2014, KDHE launched the Public Water Supply Data Collector (PWSDC), a web-based survey tool used to conduct the 2014 Capacity Development Survey. Data collected in 2002, 2005 and 2008 will be maintained for historical purposes only.

Due to the change in survey format and data collection procedures, data from the 2014 survey reestablishes a baseline that will be used to measure improvements or identify weaknesses in water system capacity. The survey is also used to identify training and/or technical assistance needs to help systems achieve and maintain TFM capacity. The Capacity Development Survey is conducted every 3 years in conjunction with the Report to the Governor.

Beginning in February 2014, KDHE requested the 884 community water systems in Kansas to log on to the KDHE website and complete the 2014 Capacity Development Survey. As of September 18, 520 water systems have responded to the survey request. This represents approximately 58% of the community water systems in Kansas. For purposes of this report KDHE evaluated 500 of the 520 respondents.

Each water system is assigned a score based upon its survey response. This score is used to determine placement in High, Medium or Low priority category. Placement in the High category indicates the system has insufficient capabilities in all three areas (TFM) of capacity development or is extremely deficient in one area. These are also the systems that often have drinking water compliance challenges. Water systems in the Medium category usually comply with regulations and may have only a few TFM related deficiencies. The Low priority category includes the water systems that demonstrate sufficient TFM capabilities and rarely experience compliance problems. Table 1 summarizes the results of the 2014 Survey. The ultimate goal is to have the fewest number of systems in the high category with the majority of water systems in the low category.

Table 1 – 2014 TFM Capacity Development Survey Summary

Total Number of Surveys Evaluated	500	
Highest Score (1 system)	71	
Lowest Score (3 systems)	5	
Average Score	27	
Median Score	26	
Priority Ranking Summary		
Priority Category	Points	Number of Systems
High	40 or More Points	63 (13%)
Medium	20 to 39 Points	295 (59%)
Low	0 to 19 Points	142 (28%)

The 2014 survey scores will also be used to reestablish a baseline data set for each water system. Future survey data will be measured against this baseline to identify improvements and/or deficiencies in individual water system capacity. KDHE will also use the survey scores in conjunction with compliance data, sanitary survey information, and KWO drought vulnerable data to prioritize the systems for capacity development assistance.

Studies conducted by EPA indicate that small drinking water systems face greater difficulties in achieving and maintaining TFM capacity and therefore may experience higher non-compliance rates with drinking water regulations. In order to determine if small systems in Kansas also face more challenges in achieving and maintaining TFM capacity, KDHE analyzes the TFM survey data by population. Table 2 illustrates the priority ranking by population.

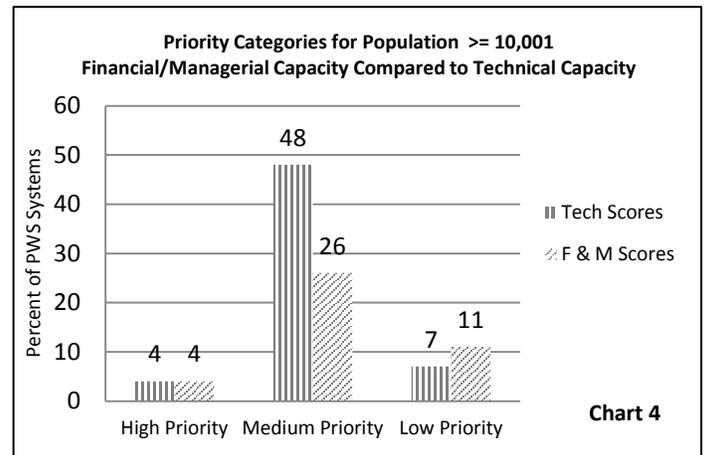
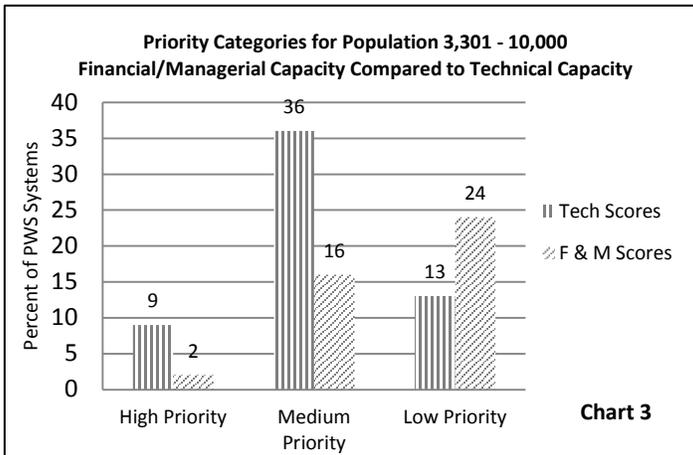
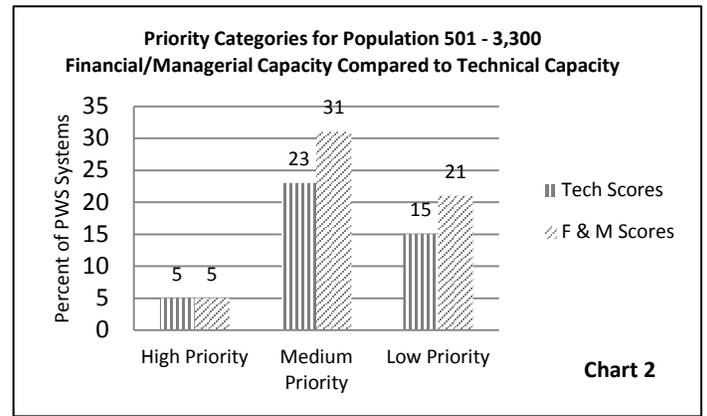
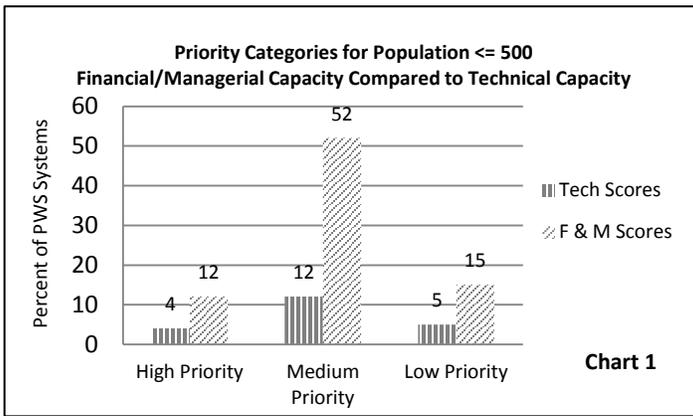
Table 2 – Priority Ranking by Population

Priority Category	Population 500 or Less		Population 501 – 3,300		Population 3,301 – 10,000		Population 10,001 or More	
	# of PWS	Percent	# of PWS	Percent	# of PWS	Percent	# of PWS	Percent
High	34	16%	22	10%	5	11%	2	7%
Medium	137	64%	115	54%	23	51%	20	74%
Low	44	20%	76	36%	17	38%	5	19%
Total	215	100%	213	100%	45	100%	27	100%

Analysis of the data in Table 2 is consistent with EPA conclusions that small systems experience greater difficulties in achieving and maintaining TFM capacity. As illustrated in Table 2, the highest percentage of High Priority systems occurs in water systems serving a population of 500 or less. Factors that may impact a small system’s ability to achieve and maintain capacity include: limited financial resources due to small customer base, lack of fulltime personnel to manage and operate the system, and low to moderate income customer base. The Capacity Development Program places special emphasis on assisting small systems through board/council education, small system operator training, on-site technical assistance, rate-setting and financial planning assistance, and asset management training and technical assistance. Planning grants are also available for water systems interested in regional planning, and for small systems with Maximum Contaminant Level (MCL) violations.

KDHE also reviews the survey data to identify training and technical assistance needs for water systems based on size. For example, KDHE uses the survey data to determine the type of assistance needed for a given water system size. Charts 1 – 4 compare managerial and financial capacity to technical capacity by population served to help identify specific training and technical assistance needs. The data in charts 1 and 2 indicate that small systems tend to experience more difficulty in financial and managerial capability, and therefore KDHE training and technical assistance efforts should emphasize board/council education and financial planning assistance. The data in charts 3 and 4 show that larger systems in the High and Medium Priority categories generally have more challenges related to technical capability, but in the Low Priority category financial and managerial challenges are more prevalent. The Capacity Development Program will place special emphasis on asset management training and technical assistance for these medium to large systems. Asset management implementation provides a framework for water systems to develop a plan to address all TFM issues with the flexibility to place special emphasis on areas where capacity is lacking.

Charts 1 – 4: Financial/Managerial Capacity Compared to Technical Capacity by Population



OTHER KDHE PROGRAMS RELATED TO CAPACITY DEVELOPMENT

Operator Certification Program

The Capacity Development Program collaborates with the Operator Certification Program to provide training and technical assistance for water operators. The two primary activities include the Small Water System Operator Training Program and technical assistance for Operators-In-Training.

The Capacity Development and Operator Certification programs worked with Kansas Municipal Utilities (KMU) to develop a training curriculum for small water system operators. Topics addressed include: distribution system operations, ground water system operations, and surface water system operations. A minimum of one 2-day workshop is conducted in each KDHE region during each state fiscal year of a five year contract with KMU.

Technical assistance is provided to Operators-in-Training through a contract with the Kansas Rural Water Association (KRWA). On-site technical assistance is provided to water system operators that are not yet certified. The goal of this technical assistance is to provide hands-on training and oversight at the water system to insure that protection of public health is maintained. This assistance is provided for a maximum period of one year or until the operator-in-training passes the certification exam, whichever occurs first.

Kansas Public Water Supply Loan Fund Program

The SDWA prohibits loans from the Kansas Public Water Supply Loan Fund to systems that are not in compliance with drinking water standards unless such loans would bring the system into compliance. The SDWA further prohibits loans to systems that do not demonstrate technical, financial and managerial capacity unless such systems agree to make the necessary changes in operations including but not limited to management, accounting, rate structure or other procedures that would ensure TFM capacity over the long term. The Capacity Development Survey is used to assess the TFM capacity of loan applicants and works with them to help address deficiencies that may exist.

The Capacity Development Program also collaborates with the loan program to promote development of asset management plans. This collaboration resulted in development of a matrix to determine eligibility for additional points in the loan ranking process. Applicants may receive up to 10 points in the loan ranking system if they are developing and/or implementing an asset management plan.

REPORT AVAILABILITY

The SDWA requires that the State make this report available to the public. The Department will post this report on the KDHE Public Water Supply Capacity Development web page. The Capacity Development web page address is:

<http://www.kdheks.gov/pws/capdev.html>.

Other Capacity Development Reports available by request or from the web page include:

- ❖ Report of Findings on Improving the Technical, Financial and Managerial Capacity of Kansas' Public Water Systems, July 2000
- ❖ State of Kansas Capacity Development Strategy for Existing Public Water Supply Systems, August 1, 2000