

Commonwealth of Kentucky

2017 TRIENNIAL REPORT TO THE GOVERNOR

October 1, 2014 – September 30, 2017

**Capacity Development Program
for Kentucky Public Drinking Water Systems**



**Department for Environmental Protection
Division of Water
300 Sower Boulevard
Frankfort, Kentucky 40601**

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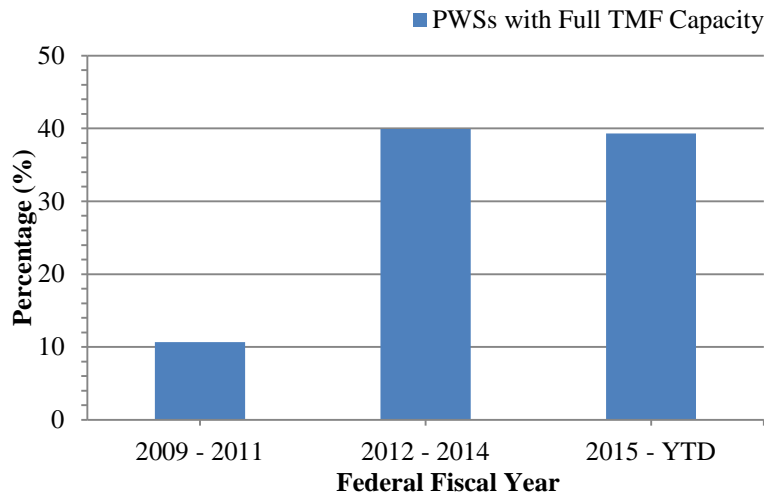
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Executive Summary

The 2017 Triennial Report to the Governor on Kentucky's Public Drinking Water System Capacity Development Program summarizes activities conducted by the Division of Water (DOW) concerning the assessment, prioritization, and assistance provided to Public Water Systems (PWSs) to improve their technical, managerial, and financial capacity to comply with the Safe Drinking Water Act (SDWA). This report fulfills Kentucky's obligation under the SDWA to report the status of the program to the Governor every three years by September 30th.

The DOW implements the Capacity Development Program (CD) by conducting assessments of each PWS in Kentucky to determine the technical, managerial, and financial capacity of each to maintain compliance with the SDWA. Assessment data and additional compliance data is analyzed to prioritize assistance to PWSs and improve capacity.

An analysis of capacity assessment data indicates that the number of PWSs with full technical, managerial, and financial capacity has increased by nearly 30% since 2009. This is due to targeted assistance by the DOW and its stakeholders in key areas of treatment process control, management, and finances by the DOW and its stakeholders.



For several years Kentucky has encouraged its PWSs lacking capacity to pool resources and merge with other local PWSs to improve service. Through this type of regionalization, the number of PWSs in Kentucky has decreased from 698 in 1999 to 436 in 2017, with nearly the entire Commonwealth now having access to public water. Regionalization was the catalyst for improving the sustainability of PWSs.

The DOW continues its successful management of the CD program and work with its stakeholders to improve SDWA compliance and ensure all Kentuckians receives safe drinking water. The top priority of the DOW is to reduce health-based violations through education, training, and on-site technical assistance at PWSs. The DOW is also modernizing the CD program to improve efficiency and enhance PWS's ability to maintain compliance with the SDWA.

2017 Triennial Report to the Governor
Kentucky's Public Drinking Water System Capacity Development Program

I. Capacity Development Program Overview

The 1996 amendments to the SDWA included provisions for the establishment of a Drinking Water State Revolving Fund (DWSRF) to finance construction and improvements to new and existing PWSs. To receive the full allocation of DWSRF funds, the SDWA required that states develop and implement a CD program to ensure that all PWSs have the technical, managerial, and financial (TMF) capacity necessary to meet regulatory requirements and consistently provide safe drinking water to customers.

The SDWA requires each state to possess the legal authority to implement a CD Program, develop a strategy to assist PWSs in improving and maintaining TMF capacity, and submit a triennial report to the Governor detailing the effectiveness and progress made by the program. In response to the 1996 SDWA amendments, the Kentucky General Assembly passed House Bill 598, codified as Kentucky Revised Statutes (KRS) 151.630 – 151.636, which directed the Energy and Environment Cabinet (EEC or the cabinet) to develop and implement a CD program consistent with Federal regulations. The CD strategy is required to address five elements:

- The method or criteria the cabinet will use to identify and prioritize the PWSs most in need of improving TMF capacity;
- A description of the institutional, regulatory, financial, tax, or legal factors at the federal, state, or local level that encourage or impair CD;
- A description of how the cabinet will use the authority and resources of the SDWA to assist PWSs in complying with drinking water regulations, encourage development of partnerships between PWSs to enhance TMF capacity, and assist in the training and certification of operators;
- A description of how the cabinet will establish a baseline and measure capacity improvements to comply with drinking water law and regulations; and
- Identify key stakeholders that have an interest and are involved in development and implementation of the CD strategy.

The DOW worked with its stakeholders and the public to develop the initial CD criteria and strategy, which was submitted to the USEPA in September of 2000. In 2008 the cabinet and its stakeholders revised the CD strategy to establish additional criteria that identify PWSs in need of improving capacity. Additionally, drinking water regulations have become more stringent and infrastructure is at the forefront of concern. In order to ensure the sustainability of PWSs, in 2017 the cabinet and its stakeholders began modernizing the CD strategy to improve efficiency in identifying and assisting PWSs to provide safe drinking water to customers. The primary goal of the CD program is to ensure that all PWSs in Kentucky maintain the TMF ability to provide safe drinking water and to remain compliant with the SDWA.

II. Capacity Development Program Implementation

Capacity Assessment

The DOW retains primacy in regulating community and non-community PWSs in Kentucky (Table 1). Currently there are 436 regulated PWS with 77% serving communities with populations less than 10,000 people (Table 2). Although these PWSs serve a small portion of Kentucky's overall population, historically they have the greatest need for assistance.

Table 1: The number of regulated water systems in Kentucky by system type.

	Water System Type	Number
Regulated PWSs	Community	385
	Non-Community	51
State Regulated Water Systems	Semi-Public	54
	Bottled Water	6
TOTAL		496

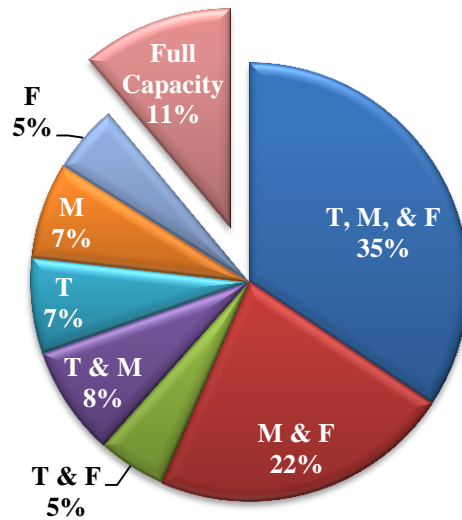
Table 2: A State-wide view of the number and percentage of PWSs in each size category and the total population served by each system size.

System Size by Population Served	Number of Water Systems	Percentage (%) of Total Water Systems	Population Served
< 10,000	337	77	1,066,237
≥ 10,000	99	23	3,482,558

The drinking water sanitary survey is an in-depth, on-site evaluation of a PWS’s source water, treatment processes, infrastructure, management, and finances. The sanitary survey is conducted once every three years at Community Water Systems (CWSs) and once every five years at all Non-Community Water Systems (NCWSs), pursuant to SDWA regulations. DOW conducts the sanitary surveys, developed by the DOW and its stakeholders, to obtain critical TMF information in accordance with the CD strategy. A PWS is deemed to lack capacity if any critical question is answered unfavorably. Data gathered from the sanitary survey provides the clearest measure of system capacity and is used in conjunction with compliance data and the Enforcement Response Policy (ERP) to track, prioritize, and provide assistance to PWSs.

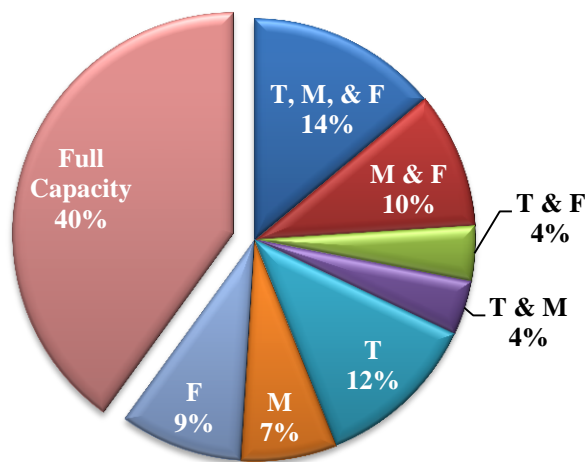
Initial baseline sanitary surveys containing the capacity assessment (Figure 1) were conducted at PWSs beginning in FFY 2009 and ending in FFY 2011. This initial assessment indicated that 89% of PWSs lacked some form of capacity. Of these PWSs, 35% were deficient in TMF capacity which jeopardized their ability to remain compliant with the SDWA.

Figure 1: PWS sanitary survey baseline data of incomplete capacity from FFY 2009 through FFY 2011.



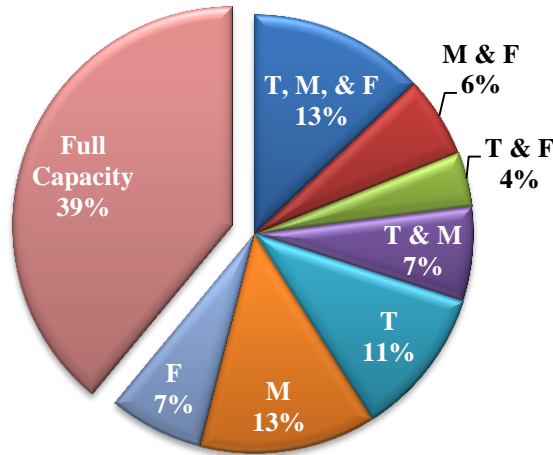
Subsequent sanitary surveys conducted from FFY 2012 through FFY 2014 indicated a dramatic increase of 29% in the number of systems with full capacity compared to baseline data (Figure 2). Water systems with insufficient TMF capacity dropped from 35% to 14% in the same timeframe, further indicating improvements in the ability to maintain SDWA compliance. This data may indicate that Kentucky’s CD strategy is improving PWS capacity. However, the number of PWSs deficient in individual areas of financial and technical capacity increased slightly, which signifies PWSs’ continued need for assistance from the DOW and its contractor.

Figure 2: PWS sanitary survey data of incomplete capacity from FFY 2012 through FFY 2014.



Data collected from FFY 2015 through FFY 2017 indicates that the number of PWSs with full capacity, and those lacking TMF capacity, remains comparatively unchanged since the previous assessment period.

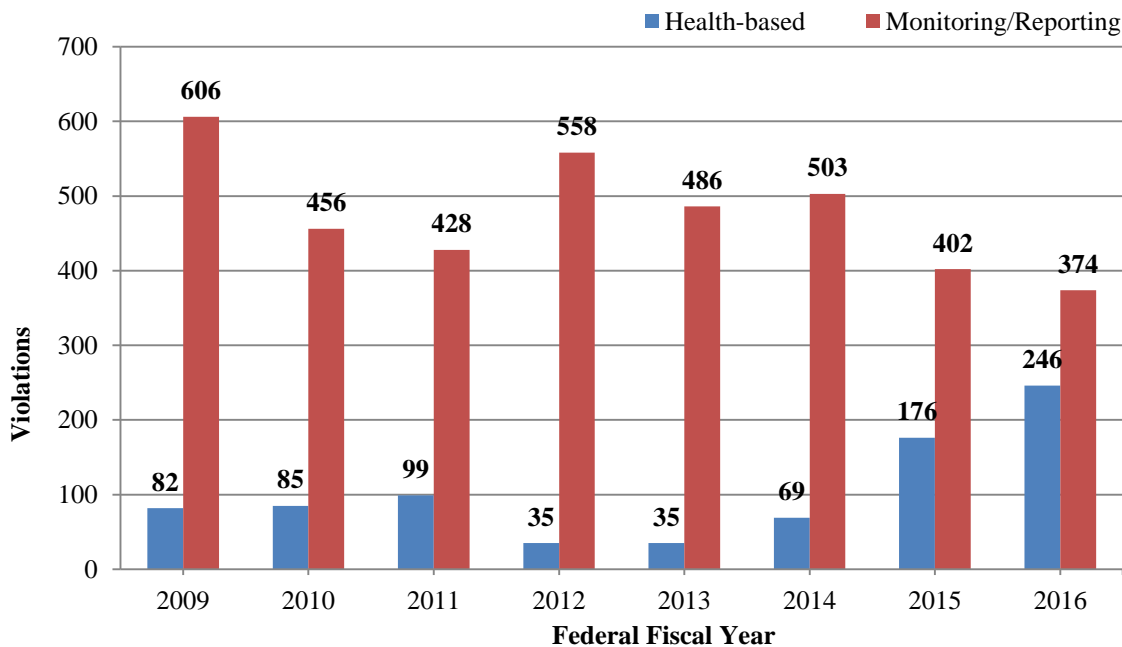
Figure 3: Current PWS sanitary survey data combinations of incomplete capacity from FFY 2015 through FFY 2017.



Drinking Water Violation Trends

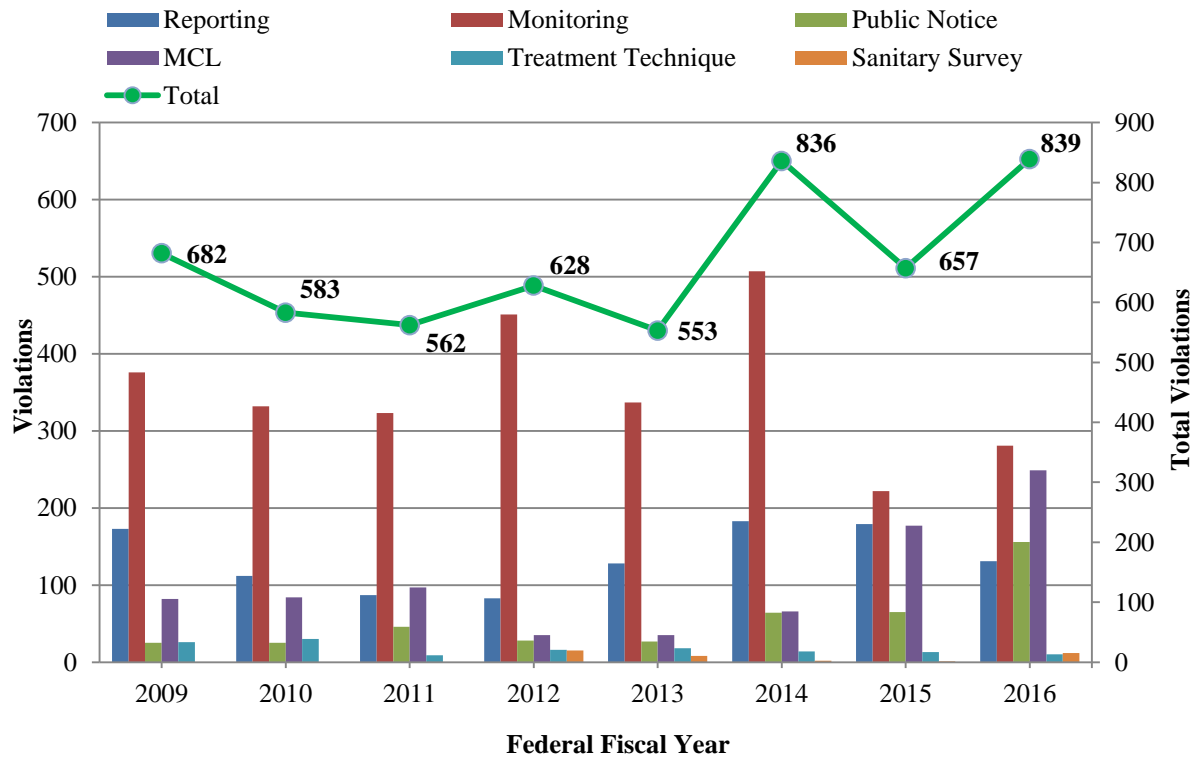
The SDWA requires PWSs to monitor treated water for contaminants and report results to the DOW at regular intervals during the year. Compliance data is assessed against SDWA requirements and a Notice of Violation (NOV) is issued when contaminant levels exceed specific limits, or when monitoring or reporting is not properly conducted. Historically, the greatest numbers of PWS violations are administrative in nature (Figure 4). However, maximum contaminant level (MCL) violations have risen since FFY 2014 due to the implementation of the Stage 2 Disinfection By-Product Rule (DBPR) and Revised Coliform Rule (RTCR).

Figure 4: Health-based and monitoring and reporting violation trends.



The Stage 2 Disinfection By-Products Rule (DBPR) requires PWSs to monitor levels of potentially carcinogenic compounds, Total Trihalomethanes and Haloacetic Acids, in treated drinking water. These Disinfection By-Products (DBPs) are classified as chronic contaminants, meaning that health risks may occur from long-term exposure over a certain concentration. Consecutive water systems (PWSs that purchase water from other PWSs) are particularly susceptible to elevated DBP levels due to increased water age as it is conveyed through the distribution system. DBP exceedances constitute 99% of health-based violations which have increased dramatically since FFY 2013, and remain a significant technical challenge for many Kentucky PWSs (Figure 5). Since 2014, the DOW and its stakeholders have focused significant resources on assisting PWSs to reduce DBPs.

Figure 5: PWS violations of the Safe Drinking Water Act from FFY 2009 through FFY 2016.



Enforcement Activities

In October 2010, USEPA implemented changes to its Enforcement Response Policy (ERP) to better identify PWSs exhibiting significant non-compliance with health-based violations or with violations across multiple rules. The Enforcement Targeting Tool (ETT) prioritizes and directs enforcement response to PWSs possessing the most systemic non-compliance, and focuses on returning the system to compliance rather than simply addressing the violation. The ETT assigns points to specific violations in the following tiers:

- Acute health-based violations 10 points
- Chronic health-based violations 5 points
- Monitoring and reporting violations 1 point

Any PWS that accumulates an ETT score of 11 points or more must be returned to compliance or placed under formal enforcement within six months. Currently 43 priority PWSs are working towards returning to compliance through this process. The recent increase in priority systems is a result of ongoing

challenges with DBP control.

III. Drinking Water State Revolving Fund

The DWSRF is a national program whereby USEPA provides funding to states to advance the goals of the CD program. States are given the authority to disburse and set-aside funds from the DWSRF to assist with administration and environmental initiatives. Kentucky continues to dedicate set-aside funds to support technical assistance, CD activities, source water protection, drinking water contaminant testing, and partnerships with stakeholders to support TMF assistance to small water systems. Program administrative set-asides fund DOW personnel who track DWSRF loan projects from cradle to grave. The Public Water System Supervision (PWSS) grant is available to fund division personnel and contracts for drinking water laboratory certification auditors, as well as testing source water for contaminants such as harmful algal blooms (HABs). State and Local Assistance set-asides support contracts for United States Geological Survey (USGS) stream flow gaging data collection and technical assistance with the Kentucky Rural Water Association (KRWA) as shown in Table 3.

Table 3: Administration of the DWSRF FFYs 2012 – 2016.

		2014	2015	2016
Program Administration	Personnel	\$275,400	\$297,150	*
Public Water System Supervision	Personnel	\$1,336,414	\$1,327,590	\$226,133
	Contractual	\$40,586	\$38,767	\$12,342
State & Local Assistance	Personnel	\$1,504,850	\$1,197,285	\$172,407
	Travel	\$23,738	\$8,142	*
	Contractual	\$536,912	\$374,482	\$66,297
Small System Technical Assistance	Personnel	\$275,400	\$271,069	\$256,200
* No funds have been used in the allocated set-asides.				

Small Systems Technical Assistance

The DOW uses a portion of set-aside funds to retain a dedicated staff that provides assistance to small PWSs in need of technical capacity improvement and provides on-site technical assistance without risk of enforcement action which gives PWSs the opportunity to be proactive. A successful component of technical assistance is the Area-Wide Optimization Program (AWOP). The AWOP, developed by USEPA, provides tools and approaches for PWSs to meet water quality goals more stringent than SDWA regulations on a long-term basis. Kentucky participates in and incorporates the AWOP into its technical assistance activities, by teaching operators problem-solving skills to improve operations. The following summarizes DOW Technical Assistance staff activities From FFY 2015 through FFY 2016:

- Conducted 849 system contacts during which comprehensive technical assistance focused on DBP compliance, removal of microbial contaminants during water treatment, and addressing technical capacity deficiencies identified in the sanitary survey was provided.

- Provided seven DBP optimization trainings in the cities of Madisonville, Campbellsville, Frankfort, Morehead, and Hazard which targeted priority systems, and was attended by operators from 42 PWSs.
- Conducted annual evaluations of DBP and microbial compliance data to determine priority rankings and to identify PWSs that need technical and compliance assistance.
- Provided workshops and trainings on DBP optimization and the RTCR at the Kentucky Water and Wastewater Operators Association (KWWOA) Annual Conference.
- Conducted internal training for DOW staff on the RTCR, including corrective action and assessments requirements for PWSs.
- Through a cooperative effort with the Drinking Water Advisory Council (DWAC) a DBP Symposium consisting of speakers from the DOW, its stakeholders, and industry leaders, was provided at key locations across Kentucky to educate operators on reducing DBP formation during treatment and distribution of drinking water. The training was attended by 140 water operators from 40 PWSs.

There were 57 PWSs serving over 2.5 million Kentuckians that met microbial AWOP goals in 2016, which was an increase from 54 PWSs serving 2,120,334 in 2015. PWSs that actively participate in AWOP and meet the goals are recognized with certificates of achievement and awards.

SRF Grant and Projects

The DWSRF provides low interest loans to communities for drinking water infrastructure projects, and is administered jointly by the DOW and the Kentucky Infrastructure Authority (KIA). Between State Fiscal Year (SFY) 2014 and SFY 2017, 38 communities have received nearly \$103 million dollars to improve drinking water infrastructure. Projects that received funding represent investments in regionalization, rehabilitating, or constructing new water treatment facilities, replacing inadequate and aging water lines and tanks, and extending service to residents. Such projects improve the quality and availability of drinking water and strengthen local economies.

Water Quantity and Source Water Protection

The DOW is charged with administering those sections of KRS 151 and KRS 224A and 401 KAR 4:220 pertaining to water withdrawal permitting, water supply protection and planning, and drought assessment. These programs serve to manage the beneficial use, protection, and conservation of water, and provide support for water supply planning.

In 1991, Kentucky promulgated 401 KAR 4:220 requiring each county, its municipalities, and water suppliers to prepare a water supply plan. The plans were developed to assess existing water resources, examine water use, determine alternative water supply strategies, develop source water assessment and protection plans, and develop contingency plans to examine water supply needs. These plan requirements established a framework for providing water service to every Kentuckian by the year 2020, and Kentucky approved water supply plans for each of its 120 counties. The passage of SB 409 during the 2000 Kentucky Legislative Session created Area Water Management Councils in each Area Development District (ADDs) as a forum for local utilities and local officials to discuss, identify, review and prioritize drinking water project needs. Concurrently, KIA developed the Water Resource Information System (WRIS). The WRIS is a geo-database of Kentucky's drinking water and wastewater utilities, existing drinking water and wastewater infrastructure, and comprehensively lists the projects needed to maintain and improve the state's existing

drinking water and wastewater infrastructure. As of 2017, more than 95% of Kentucky’s population has access to safe, public water supplies. However, as we approach the year 2020, updating and streamlining water supply planning requirements to establish and develop sustainable expansion and improvement of water services to all citizens of Kentucky has become a renewed focus.

The water withdrawal permitting program regulates all withdrawals greater than 10,000 gallons per day from any surface or groundwater source, with the exception of water required for domestic or agricultural purposes, or for steam-powered electrical generating plants. Each permit contains daily withdrawal limitations and reporting requirements, and some are conditioned to provide protection for other water users, water quality, and aquatic habitat. Table 4 below summarizes active permitted withdrawals measured in millions of gallons per day.

Table 4: The daily average of permitted water withdrawals in millions of gallons per day (MGD).

Use Category	Number of Permitted Withdrawals	Daily Average (MGD)
Water Supplier	256	557
Industrial	127	183
Mining (Coal)	129	21
Mining (Non-coal)	43	15
Commercial	117	27
Aquaculture	5	26
Other	11	1

The primary goal of Kentucky’s Source Water Protection program is to protect the quality and availability of public drinking water supplies. This is accomplished by implementing community-based management plans within defined water supply protection areas. The benefits of source water protection include reducing potential health risks, preventing negative economic impacts, and improving ecological health by actively managing potential contaminants. Kentucky’s source water assessment and protection efforts have been very successful during this three-year reporting period. Source water protection plans for both surface water and groundwater have been prepared for every public water supplier in Kentucky and should be reviewed and updated regularly.

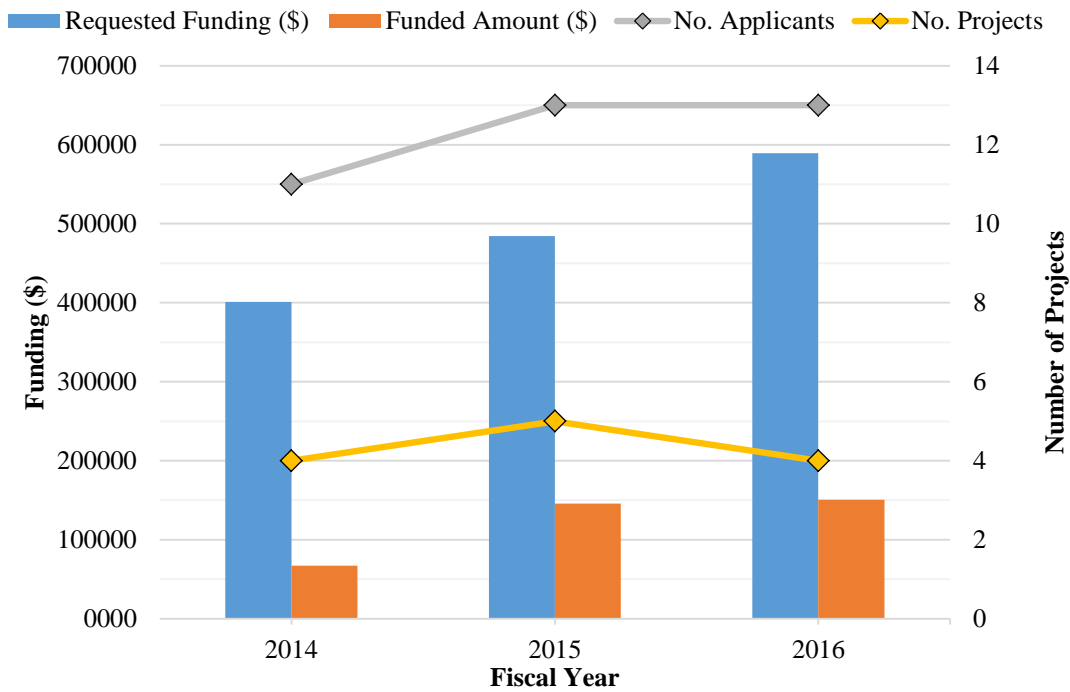
Statewide source water protection efforts during the three-year period include:

- Continuing updates to the statewide and system-specific source water protection programs, and the application of effective source water protection strategies for both surface water and groundwater systems.
- Development of five-year updates for approved source water protection plans currently in place, in accordance with the water supply planning regulations. Updates to 71 plans were completed in the last three years.
- Development of two new wellhead protection programs.
- The use of GIS to develop more effective water resource management tools that will ensure adequate quality and quantity of drinking water in the future. Efforts to delineate and study critical source water protection areas have been substantially improved with the application of spatial analysis and mapping available through GIS applications. A state-wide GIS layer of potential contaminant sources located in both surface water and wellhead protection areas is currently being developed.
- Recognizing that community involvement is key to successful source water protection, program staff facilitated 14 public meetings with 21 water systems to discuss source water protection efforts and plan updates.

- Staff provided presentations and led discussions at 24 conferences, workshops, and training events during the reporting period to continue education and outreach that enhances source water protection.
- Water Supply Protection Area signs have been posted along major roadways at the intersections of wellhead protection area boundaries, informing motorists of the sensitive nature of the area and to report spills. Signs that are missing or vandalized are being replaced. These signs are a protection strategy and a form of public education.

The Source Water Protection Assistance Program (SWPAP) was developed and implemented in 2014. This program uses DWSRF set-asides for source water protection projects. The program receives \$150,000 annually, and individual projects cannot exceed \$60,000. Since implementation of the SWPAP, 13 projects have been funded for a total of \$363,420, including plugging unused public water supply wells, development and dissemination of education and outreach materials, implementation of best management practices, and water quality monitoring and assessment. Many of the projects have developed partnerships and recruited volunteers to expand project budgets beyond the amount provided by the program. Staff has worked diligently to develop the funding program and advertise its availability to eligible applicants through many venues. With a focus on development the program has become very competitive, as illustrated in Figure 6.

Figure 6: Source Water Protection Assistance Program project funding.



Operator Certification

Kentucky’s Operator Certification program resides in the Division of Compliance Assistance (DCA) and is a pivotal partner in building TMF capacity. The program provides training and issues certification to ensure that individuals who operate drinking water systems are qualified and capable of performing their duties. Training focuses primarily on the technical knowledge required to treat water and maintain compliance with the SDWA. The following is a synopsis of drinking water operator certification activities for SFYs 2014 to 2017 (Table 5).

Table 5: Drinking water operator certification activities SFY 2014 through SFY 2017.

	2014	2015	2016	2017
Active Certifications	2875	2710	2855	2778
Training Hours Conducted	282	216	306	234
Individuals Trained	868	544	721	468
Exams Administered	428	380	501	446

State and Local Assistance

The DOW continues to utilize State and Local Assistance set-aside funds from the DWSRF to contract with the KWRA to provide technical, managerial, and financial assistance to small, rural PWSs. In FFY 2015 the contract was updated with an emphasis on providing technical assistance to priority PWSs that are out of compliance with the Stage 2 DBPR. Additional assistance is provided in the areas of operations, maintenance, training, and planning. Assistance provided to PWSs since FFY 2015 includes:

- On-site training and assistance provided to 38 PWSs to develop documented Emergency Response Plans.
- On-site leak detection assistance provided to 19 PWSs. The estimated energy savings alone for utilities is \$7,609.
- Assisted 33 PWSs in the completion of Operations and Maintenance (O&M) Manuals.
- Assisted 36 PWSs in reviewing their rates, charges, and debt consolidation, with three PWSs receiving additional assistance in filing for rate increases with the Public Service Commission.
- Assisted 186 PWSs in the preparation and reporting of compliance data, public notifications, Consumer Confidence Reports, succession planning, and cross-connection policies.
- Conducted 102 on-site technical assistance visits PWSs to reduce DBP formation during water treatment and distribution. Staff evaluated precursory organics removal, chemical treatment, water distribution, and water tank operations, to reduce DBP formation.
- Conducted five “Disinfection By-Product Mitigation for Treatment and Distribution Systems” trainings in Ashland, Prestonsburg, Madisonville, Frankfort, and Grayson. There were a total of 181 attendees representing 67 utilities.
- Conducted jar test training procedures at two PWSs. Nine operators from the two utilities participated.
- Conducted one “Cold Weather Summit” training covering emergency response planning and management during cold weather. A total of 38 operators attended representing 8 PWSs.
- Conducted three trainings titled “From the Ditch to the Desk for Drinking Water” covering information on SDWA regulations to help operators better perform their roles as drinking water personnel.

IV. Stakeholder Involvement

The Drinking Water Advisory Council (DWAC) is a stakeholder panel convened by the division director several years ago to address issues affecting consumers and the regulated community, and meets publicly on a quarterly. It is comprised of government officials and representatives of public and rural water utilities from the following organizations:

- Kentucky Division of Water
- Kentucky Association of Counties
- Kentucky Council of Area Development Districts
- Division of Compliance Assistance
- Division of Plumbing
- Department for Public Health
- American Council of Engineering Companies of Kentucky
- Kentucky Infrastructure Authority
- Kentucky League of Cities
- Kentucky Municipal Utilities Association
- Public Service Commission
- Rural Community Assistance Partnership
- Kentucky-Tennessee American Water Works Association
- Kentucky Water & Wastewater Operators Association
- Kentucky Rural Water Association
- Louisville Water Company, representing large water systems
- Bowling Green Municipal Utilities, representing medium water systems
- Warren County Water District, representing medium water systems
- VACANT, representing small water systems
- Kentucky American Water Company, representing privately-owned water systems

V. Current and Future Activities

Technical Assistance

In 1999 there were 698 PWSs in Kentucky. Through regionalization efforts, there are now 436 PWSs serving more than 95% of the Commonwealth. While merging assets and resources has enhanced some PWSs' ability to maintain compliance with the SDWA, regionalization has also created new challenges in maintaining compliance, particularly with the Stage 2 DBPR. Improper treatment, aging and/or inadequate infrastructure, and increased water age during transmission to customer taps can produce harmful DBP contaminants in drinking water. Consecutive systems with no infrastructure to treat purchased water have particularly struggled to maintain compliance with Stage 2 DBPR. Moving forward, the DOW and its stakeholders will continue efforts to reduce DBP non-compliance through targeted technical assistance, and anticipates seeing results this coming year.

Capacity Development Strategy

The current version of the CD strategy was developed nearly ten years ago. Since then, new SDWA regulations have been implemented while state government personnel have been reduced. To address these challenges, a subcommittee of the DWAC is currently reviewing Kentucky's CD strategy to enhance efficiency and efficacy, and modernize PWS assessment criteria. Once completed, the subcommittee will present recommendations to the DWAC with a goal of implementing necessary changes to the program within the next year.

The DOW is also working with its partners at the KIA to enhance the capabilities of the WRIS. The goal is to expand the functionality for asset management planning and potentially incorporate the capacity assessment into the WRIS. Pilot testing for the asset management tool will begin by spring 2018.

Drinking Water Action Plan

The DOW is developing a Drinking Water Action Plan to identify and address key infrastructure, economic, regulatory, and other challenges to improving the sustainability and resiliency of Kentucky's PWSs. A Risk Assessment tool, which utilizes data from the drinking water sanitary survey, inspections, and compliance data to determine TMF risk factors, was constructed to rate Kentucky's PWSs. The tool is dynamic and allows users to analyze specific technical, managerial, and financial criteria. This data is crucial for the DOW and its stakeholders to address current and future needs of PWSs and can be used to develop strategic plans moving forward. A draft of the plan is currently under internal review. Prior to implementation, the DOW will seek comment on the plan from the DWAC.

Report Availability

The 2017 Triennial Report to the Governor on Kentucky's Capacity Development Program for October 1, 2014 through September 30, 2017 is a requirement of the USEPA for primacy States and must be made public. The DOW makes this report available to the citizens of Kentucky by:

- Posting the report online at <http://water.ky.gov/DrinkingWater/Pages/CapDev.aspx>

Any comments, concerns or questions regarding this report may be directed to Russell Neal at 502-782-7026, or russell.neal@ky.gov.

Appendix A – List of Acronyms

ADD – Area Development District
AWOP – Area-Wide Optimization Program
CD – Capacity Development
CWS – Community Water System
DBP – Disinfection By-Product
DCA – Division of Compliance Assistance
DOW – Division of Water
DWAC – Drinking Water Advisory Council
DWSRF – Drinking Water State Revolving Fund
EEC – Energy and Environment Cabinet
ERP – Enforcement Response Policy
ETT – Enforcement Targeting Tool
FFY – Federal Fiscal Year
GIS – Geographical Information System
HAA – Haloacetic Acid
HAB – Harmful Algal Bloom
KAR – Kentucky Administrative Regulation
KIA – Kentucky Infrastructure Authority
KRS – Kentucky Revised Statute
KRWA – Kentucky Rural Water Association
KWWOA – Kentucky Water and Wastewater Operators Association
MCL – Maximum Contaminant Level
MGD – Millions of Gallons per Day
NC – Non-Community Water System
NOV – Notice of Violation
PWS – Public Water System
RTCR – Revised Total Coliform Rule
SDWA – Safe Drinking Water Act
SFY – State Fiscal Year
Stage 2 DBPR – Stage 2 Disinfection By-Product Rule
SWP – Source Water Protection
SWPAP – Source Water Protection Assistance Program
TMF – Technical, Managerial, & Financial
TTHM – Total Trihalomethane
USEPA – United States Environmental Protection Agency
USGS – United States Geological Survey
WRIS – Water Resource Information System

Appendix B – Definitions

Capacity Development – A State effort to help drinking water systems improve their finances, management, infrastructure, and operations so they can provide safe drinking water consistently, reliably, and cost-effectively.

Community Water System – A Public Water System which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

Financial Capacity – The ability of a Public Water System to acquire and manage sufficient financial resources to achieve and maintain compliance with the Safe Drinking Water Act.

Managerial Capacity – The ability of a Public Water System to conduct its affairs in a manner enabling the system to achieve and maintain compliance with the Safe Drinking Water Act.

Non-Community Water System – A Public Water System that is not a community water system. A non-community water system is either a “transient non-community water system” or a “non-transient non-community water system.”

Non-Transient Non-Community Water System – A Public Water System that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year.

Public Water System – A system for the provision to the public of water for human consumption through pipes or, after August 5, 1998, other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least 60 days out of the year. Such term includes: any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system; and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Such term does not include any “special irrigation district.” A Public Water System is either a “community water system” or a “non-community water system.”

Sanitary Survey – An onsite review of the water source, facilities, equipment, operation and maintenance of a Public Water System for the purpose of evaluating the adequacy of such source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water.

Small Water System – A Public Water Systems serving fewer than 10,000 people.

Technical Capacity – The physical and operational ability of a water system to meet Safe Drinking Water Act requirements.

Transient Non-Community Water System – A non-community water system that does not regularly serve at least 25 of the same persons over six months per year.