

Triennial Report to the Governor

**Capacity Development Program
For Kentucky Drinking Water Systems**

COMMONWEALTH OF KENTUCKY

October 1, 2005 – September 30, 2008

Sandy Gruzesky, Director
Division of Water
502/564-3410

sandy.gruzesky@ky.gov



EXECUTIVE SUMMARY CAPACITY DEVELOPMENT PROGRAM FOR KENTUCKY DRINKING WATER SYSTEMS

Introduction

Section 1420 of the Safe Drinking Water Act (SDWA) requires primacy states to develop a strategy for assisting public water systems (PWSs) to develop the technical, financial and managerial capacity to comply with the regulatory requirements of the SDWA. Subsection (c)(3) requires that a triennial report be sent to the Governor and be made available to the public describing the efficacy of the strategy and progress made.

The United States Environmental Protection Agency (USEPA) published a document on May 12, 2005, to assist states in the preparation of the second triennial report, titled “Suggested Reporting Content for the Development of State Capacity Development (CD) Program Reports to the Governor”. This report includes the two SDWA mandated topics and follows the report suggestions outlined by USEPA.

Highlights of the Strategy’s Effectiveness

Year	Number of Public Water Systems	Population Served (in millions)*	Number of Persistent Violators
2002	595	3.6	20
2005	521	3.7	11
2008	492	4.9	14

*These numbers were determined by multiplying the number of residential connections by a household factor of 3.3 people per home. The factor appears in regulation 401 KAR 8:200, Section 1, and is slightly inflated. The Division of Water is in the process of revising these regulations and plans to revise the factor downward to reflect a more representative population served number.

This data was utilized from past CD reports to the Governor. Values show the reduction in number of public water systems and persistent violators since the first CD report to the Governor in 2002 demonstrating our success in promoting regionalization. During the same period, the number of people served by public water systems increased by over 1 million.

The Voluntary Drinking Water Budget Agreed Orders and waterline sanctions have been especially effective in assisting PWSs develop technical, managerial and financial capacity to provide their customers with drinking water that meets the SDWA requirements.

The Cabinet continues to provide training and issue certifications to ensure that individuals who operate drinking water systems are qualified and capable of performing their duties. Many stakeholders also provide training to meet the growing need for the drinking water profession and public health.



Kentucky continues to successfully manage its statewide and system wellhead protection programs, and apply effective source water protection strategies. Numerous success stories are presented in this report.



Triennial Report to the Governor

Capacity Development Program For Kentucky Drinking Water Systems

OVERVIEW OF KENTUCKY'S CAPACITY DEVELOPMENT STRATEGY

The Safe Drinking Water Act (SDWA) amendments of 1996 included provisions for the establishment of a Drinking Water State Revolving Fund (DWSRF) to finance construction and improvement to new and existing Public Water Systems (PWS). To receive the full allocation of DWSRF funds, the SDWA requires that states develop and implement a CD program to ensure that all PWSs have the technical, managerial and financial capacity to meet state and federal regulatory requirements.

In September 2000, the Commonwealth submitted its CD strategy to the United States Environmental Protection Agency (USEPA). To fulfill SDWA requirements, the plan included two elements: a description of Kentucky's legal authority to require new PWSs to show technical, managerial and financial ability to meet regulatory requirements and a strategy to assist existing PWSs to develop or improve adequate technical, managerial and financial capacity. This ambitious plan laid out five major objectives for the Commonwealth to meet, and through the last eight years of implementation, substantial progress has been made in accomplishing those objectives. These objectives were created to fulfill requirements of Section 1420 of the SDWA and KRS 151.632.

The first objective in Kentucky's CD strategy is to determine methods the Division of Water (DOW) will use to identify and prioritize existing PWSs in need of improving technical, managerial and financial (TMF) capacity. To meet this objective, the DOW created a criteria for ranking systems on a TMF capacity need basis. An initial ranking system was drafted, but currently is not being used. The DOW established a capacity development stakeholder's workgroup to review the criteria and assess its effectiveness. Their suggestions to date are not to implement a ranking system, but to have all systems be evaluated on a set of questions for TMF Capacity. If systems do not have capacity through this evaluation process, then they would be required to submit capacity development plans explaining how they intend to achieve and maintain capacity. Workshops will be scheduled in 2009 to train systems on what would be expected of them. In these trainings, free software developed by EPA to help maintain financial capacity in infrastructure sustainability will also be introduced. Currently DOW is evaluating PWSs based on technical triggers such as water availability, compliance history and treatment process performance through a capacity overview.

Under this section of the strategy a PWS is also allowed to request technical assistance from the DOW and enter into a voluntary Agreed Order that addresses capacity development within the PWS. Since the initiation of these voluntary Agreed Orders, 24 PWSs have entered or



agreed to enter into an enforceable strategy that allows limited growth while capacity is improved within the system. Since 2005, 10 PWSs have had agreed orders closed as they achieved and maintained capacity within the system.

Accomplishments in Kentucky's CD Program have been realized with success stories from Martin County Water District, Elkhorn City Water Department, Wood Creek Water District, East Laurel Water District, West Laurel Water Association, Crittenden-Livingston County Water District and Mountain Water District. A number of strategies have contributed to the overall accomplishments of the CD Program during this three-year reporting period.

The "Progress" section of the report also includes discussions of these topics: DWSRF, new and inactivated systems, system consolidation and restructuring, training efforts and source water protection strategies.

The strategy must describe the institutional, regulatory, financial, and tax or legal factors at the federal, state or local level that encourage or impair capacity development. The DOW recognizes a number of factors that impair the process of effectively developing capacity in PWSs. From a federal level, Kentucky continues to face the issues with increasing regulatory requirements placed on PWSs which makes compliance challenging in terms of both monitoring costs and technical resources. This is especially true for small PWSs that already have limited TMF capacity. The DOW maintains their comprehensive compliance assistance and technical assistance programs to offer assistance without the risk of a resulting enforcement action. Many state agencies are working together to ensure systems have and maintain adequate capacity. These agencies include DOW, Kentucky Rural Water Association (KRWA), Rural Community Assistance Partnership (RCAP) and other non-state agencies such as Rural Development (RD). As systems start looking to the future and we start asking them to think about sustainable infrastructure, more systems are looking at raising rates to cover their costs. In many areas rates may not have been raised in years or even decades and the political risks associated with raising rates deter mayors, city councils, water system boards or other PWS decision makers from moving forward with rate increases. But as federal funds continue to diminish, systems are required to determine how failing infrastructure will be replaced. And lastly, a major issue that faces Kentucky this year is the loss of trained, knowledgeable and experienced water system operators. Some are retiring, while others are accepting jobs at larger systems that offered them higher pay and better benefits

We have had limited success with municipalities due to our inability to assert regulatory authority. The only real success has been with the threat of issuing a boil water advisory when public health is in jeopardy. One example of Kentucky's CD Program's struggle with municipalities is Campton Water Works. The city was put on sanctions in 2002 for over-production and low pressure in the distribution lines. Sanctions were partially lifted towards the end of the year as Campton showed improvements. In 2005, they were placed on a permanent boil water advisory for poor plant operation; part of the plant was inoperable which led to untreated water entering into the drinking water supply. These problems were reportedly remedied, but in 2006 they resurfaced as the system sought funding for a new water treatment plant that would solve their capacity issues. A closer look at the system showed problems



ranging from 43% water loss, pressure problems throughout the system, and uncertified operators and unmanned operations at the Water Treatment Plant. All of these deficiencies indicate that Campton's PWS lacks technical, managerial and financial capacity. The DOW plans to develop and implement regulations over the next few years to enforce the CD strategy, so the CD section staff have more effective tools to deal with similar problems in the future.

Another example that demonstrates the limited success we had with municipalities is the problem we encountered when we tried to get the city of Tompkinsville to consider abandoning their inadequately run plant and start buying water from Monroe County Water District (MCWD) after MCWD builds their plant. Currently MCWD buys water from Tompkinsville, but as water demand in MCWD continues to increase the city's plant is unable to meet these needs due to water source capacity issues and inadequate financial capacity. In the meantime, MCWD applied for financial assistance from the DWSRF to build a water treatment plant on the Cumberland River (a large sustainable water source) to meet their increasing water needs. MCWD owns a distribution system that operates well within the SDWA requirements and appears to have very good TMF capacity. So they are a good candidate to build and operate a public water system. But since MCWD is Tompkinsville's largest customer, the city will have a difficult time maintaining their system if MCWD stops buying water from them. The DOW have not given up on this project; we will continue to work with both communities on a regional solution to meet their current and future water needs. After capacity development regulations are in place, the DOW should have more regulatory authority to promote alternatives that are consistent with the goal of the CD strategy and meet the water needs of communities.

The CD strategy has been updated to describe how the Energy and Environment Cabinet will use the authority and resources of the SDWA to assist PWSs in complying with drinking water regulations, encourage partnership developments between PWSs to increase capacity and assist PWSs in training and certification of operators. In the revised strategy being sent to EPA Region IV, Kentucky will assist water systems by continuing to provide technical assistance for regulatory compliance and supporting the Area-Wide Optimization Program (AWOP) program; by continuing to support the Division of Compliance Assistance (DCA) to properly train and certify operators to operate public water systems; by working with Western Kentucky University (WKU) on programs to train operators; and by promoting regionalization efforts through the DWSRF program.

The DOW received USEPA approval for the Kentucky Operator Certification Program on September 19, 2005. Under USEPA, state certification programs must conform with "Final Guidelines for the Certification and Recertification of the Operators of Community and Nontransient Noncommunity Public Water Systems."

The CD strategy has been updated to accurately describe how the Cabinet will establish a baseline and measure improvements in capacity to comply with drinking water laws and regulations. To accomplish this, the stakeholders and the DOW have determined a number of indicators that measure improvements in capacity development by PWSs in the state. These indicators include the following: increase in statewide water system availability to Kentuckians; the reduction of persistent violators; the number of PWSs combining resources through



regionalization and mergers; loan and grant tracking through the DWSRF and Special Appropriation Grants; the number of technical assistance visits requested and performed and the identification of qualifying PWSs who will enter into voluntary water budget agreed orders and letters of agreement to address capacity problems. Baseline and improvement measures are described in the “Progress” section of this report.

The State must solicit partners with an interest in developing and implementing the CD strategy from federal, state and local levels. A list of ongoing stakeholders is provided and discussed in the “Progress” section of this report.

PROGRESS IN IMPLEMENTATION OF THE CAPACITY DEVELOPMENT PROGRAM

Below is a tabular representation of the progress Kentucky has made in implementing its CD program.

Year	Number of Public Water Systems	Population Served (in millions)*	Number of Persistent Violators
1999	698	3.3	41
2002	595	3.6	20
2005	521	3.7	11
2008	492	4.9	14

*These numbers were determined by multiplying the number of residential connections by a household factor of 3.3 people per home. The factor appears in regulation 401 KAR 8:200, Section 1, and is slightly inflated. The Division of Water is in the process of revising these regulations and plans to revise the factor downward to reflect a more representative population served number.

This data was utilized from past CD reports to the Governor and our original baseline. Values show the reduction in the number of public water systems and persistent violators since the beginning of the CD program in 1999. During the same period, the number of people served by public water systems increased by over 1 million. The large reduction in PWSs over the past number of years has been due primarily to the state’s encouragement for PWSs to combine resources and capacity by regionalizing and expanding service areas. Through technical assistance and occasional enforcement processes, persistent non-compliers are trying to attain and maintain their technical, managerial and financial capacities to meet state and federal laws or merge with other PWSs that have the capacity to better serve customers and meet drinking water laws.

In 1990, Kentucky began a program for the purpose of developing long-range water supply plans for each county that included all municipalities and public water systems. The plans include an assessment of the existing public and private water resources, an examination of present water use and projections of future needs and a determination of viable alternative strategies, including regionalization that can be implemented in order to meet future water supply



needs. This process has also led to the development of numerous plans to extend drinking water service to unserved areas and underserved areas.

In recent years, Geographic Information Systems (GIS) has become an invaluable tool in planning water infrastructure on a watershed basis. GIS allows public water systems and the state to digitally display, manipulate, and monitor their infrastructure with aerial views. These maps are used to aid planners in several areas, including, but not limited to, identifying additional source water availability; identifying underserved areas; identifying, locating, and cross-referencing resources and infrastructure during droughts in preparation for PWSs which run the risk of raw water shortage; determining the most logical sources and the most practical direction to transport raw water and/or finished water when considering mergers or regionalization; monitoring trends in capacity development as systems grow/expand; and the maps are used visually to understand the challenges some systems face with pressure zones, distribution routes, and watershed management.

The strength of GIS is also being used to develop more effective tools to manage water resources in ways that will ensure adequate quality and quantity of drinking water sources. 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. Source water protection areas for both surface water and groundwater have been prepared for every public water supplier in Kentucky using GIS.

Kentucky continues to utilize set-aside funds from the DWSRF for Technical Assistance and for Capacity Development (in accordance with SDWA Section 1452[k][2][c]), as follows:

Year	Personnel and Travel	Contracts	Equipment
2001	\$112,886	\$124,500	\$0
2002	\$196,102	\$0	\$0
2003	\$0	\$0	\$0
2004	\$179,780	\$214,331	\$0
2005	\$131,731	\$181,617	\$78,139
2006	\$47,027	\$80,000	

- 2004 – Funded contracts for United States Geologic Society (USGS) water budget analysis work and continued development of Safe Drinking Water Information Systems (SDWIS) database
- 2005 – Funded contracts for USGS water budget analysis work and continued development of SDWIS database
- 2006 - \$80,000 has been set aside to use on the USGS phase II water budget analysis work. The equipment and travel funds for the 2006 grant are still available as well.
- To date, the 2007 and 2008 set aside funds have not been used yet.

The DOW has committed a dedicated staff of trained staff to provide Technical Assistance and Outreach (TAO) to PWSs that request guidance in improving technical capacity. On-site technical assistance is offered to PWSs without threat of enforcement action, giving PWSs an



opportunity to be proactive in optimizing technical capacity. From October 2005 through September 2008, staff associated with the Technical Assistance activities of the Kentucky drinking water program utilized set-aside dollars from the DWSRF for support. The primary set-aside used was for small system technical assistance. The following is a summary of the activities over the designated timeframe – *Note that for the purposes of this summary a small water system is one that serves less than 10,000 in population.*

- Through the KY Area-Wide Optimization Program (AWOP), 2 Performance-Based Training (PBT) events and 1 Comprehensive Performance Evaluation (CPE) were conducted. The 2 PBT events involved 15 water systems, with 5 of those serving less than 10,000 in population. In the summer of 2008, a third PBT will begin, based on water systems in the Big Sandy watershed—a total of 7 water systems will be involved, 3 of which are small water systems. Also in July 2008, a training CPE will be conducted in western KY at a small water system.
- Over 2,200 small system contacts were made in the 3-year time frame of this report (6 staff members).
- Disinfection efficiency measured by C-Ts (disinfection Concentration and contact Time) was evaluated at 7 small and 9 large water systems. C-Ts have been established at all surface water treatment plants with re-evaluations occurring when water plants expand or change treatment processes. During the summer of 2008, DOW will begin evaluating groundwater treatment plants for similar disinfection ability.
- KY regulations require that all treatment chemicals used in the drinking water process be approved by the DOW. Over this 3-year time frame, 76 small system and 93 large system chemical changes were approved.
- The Surface Water Treatment Rule requires any disinfection change to be assessed for potential effects to microbial water quality. Water systems began evaluating changes in disinfection practices as one means of controlling disinfection by-products; however, changes in disinfection should not compromise the ability to control the pathogens in the finished water. For small water systems, 14 disinfection changes were approved and 12 for larger systems.
- Operational and maintenance issues are addressed on an as-needed basis. Such issues include distribution flushing, situations warranting boil water advisories, on-line analyzer usage, etc. For the current 3-year time frame, 47 small systems reported O&M issues as did 57 large systems.
- The new Stage 2 Disinfection By-Products Rule and the Long Term 2 Surface Water Treatment Rule (Stage2/LT2) went into effect in January 2006. Both involve intensive early implementation activities staggered by water system population size. KY entered into an agreement with EPA Region IV to implement many of the early activities associated with these 2 rules, including training, tracking of submissions and approving monitoring plans. Schedules 1-3 include all systems that are associated with a PWS that serves more than 10,000 in population; Schedule 4 systems serve less than 10,000. Eighteen DOW-sponsored training events for these 2 rules were conducted for water systems across the state, focusing on early implementation. In addition, Technical Assistance staff presented similar training at 2 KY Water and Wastewater Operator Association annual conferences and 4 sectional



meetings in addition to KRWA and KY Public Service Commission (PSC) training events (2 annual conferences and 3 management training sessions).

- The KY drinking water program also maintains a website that includes a wide variety of information from technical documents to regulation to compliance forms. An email distribution list is maintained and used to disseminate information to the regulated public.

Another tool that the DOW has found very successful is the voluntary Drinking Water Budget Agreed Orders. Drinking Water Budget Agreed Orders are designed to allow PWSs nearing system design capacity to continue limited growth (up to 100%) through careful planning and management of available water. PWSs are given a budgeted amount of water based on annual production levels. For example, a 1 million gallon per day (MGD) PWS currently producing at 90 percent of design capacity would receive a budget of 100,000 gallons per day. PWSs then prioritize projects and the estimated demand for each project is subtracted from the initial water budget. Through the voluntary Drinking Water Budget Agreed Orders, the DOW can avoid issuing system-wide line extension bans or tap-on bans to systems that have plans or are willing to make plans to expand their system design capacity. Agreements typically include a two to five year planned solution to increase the system’s design capacity. At present, the DOW is monitoring 24 voluntary Water Budget Agreed Orders and have completed and closed 10 since its inception in 2005.

Drinking Water Budgets are a large part of the Commonwealth’s Drinking Water Sanction program. As stated above, Water Budget Agreed Orders give systems the ability to grow to their full design capacity. Oftentimes, a sanction or Water Budget not only affects the producing system, but also systems that purchase water from that producing PWS. For instance, Liberty Water Works was nearing its design capacity. Liberty Water Works produces water for its own customers as well as for customers of the East Casey County Water District. A full sanction would have stopped growth in Liberty and East Casey County. Instead, the limited-growth sanction presented to Liberty and East Casey allowed both systems to continue to make residential tap-ons and limited water line extensions. The table below summarizes systems currently on or soon to be on Water Budget sanctions:

Producing PWS on Water Budget	Consecutive Purchasing PWS on Water Budget
Jamestown Municipal Water Works	Adair County Water District (partial) Russell Springs Water Works
Campton Water Works	
Manchester Water Works	North Manchester Water Assn.
Liberty Water Works	East Casey Water District
Martin County Water District	
Greenup Water System	Wurtland
Cawood Water District	
Hyden-Leslie County Water District	



Unfortunately, a few drinking water systems statewide are producing water at or above 100 percent of their design capacity or have pressure issues that do not relate to their WTP's design capacity. In these cases, a full sanction must be imposed on the PWS. These systems are still allowed to submit sanction exceptions with additional documentation supporting why a water line extension or tap-on should be allowed. These are reviewed on a case by case basis. Summarized below are all of the full sanctions currently imposed on water systems in Kentucky:

Producing PWS on Full Sanction	Consecutive Purchasing System affected by Full Sanction of Producer
Burkesville Water Works	Cumberland County Water District *
Wheelwright Utility Commission	
Eubank Water District	
Centertown Water System	

* The DOW has allowed Cumberland County to enter into a Water Budget Agreed Order since it does not rely solely on Burkesville for its supply. The system produces water and purchases water from another source.

Another key to successful implementation of Kentucky's CD strategy is the partnerships that has formed between the DOW and other parties interested in capacity development of Kentucky's PWSs. Below is a list of active stakeholders who have contributed to the success of Kentucky's CD Program.

- Kentucky's Public Water Systems
- PWS consumers and potential consumers
- Kentucky League of Cities
- Kentucky Rural Water Association
- Kentucky Cabinet for Health Services
- Kentucky Infrastructure Authority
- Kentucky Division of Local Government
- Kentucky Geological Survey
- Rural Community Assistance Program
- Kentucky Municipal Utilities Association
- Kentucky Water and Wastewater Operators Association
- American Water Works Association
- Kentucky Division of Plumbing
- Kentucky Public Service Commission
- Western Kentucky University (management)
- University of Louisville (financial)
- U.S. Environmental Protection Agency
- U.S. Department of Agriculture, Rural Development
- Area Development Districts
- City Governments



- County Governments
- Variety of Local Consultants

One of the challenges Kentucky has faced in the past while ensuring all PWSs have the capacity to meet drinking water laws and regulations is “Orphan” Drinking Water Systems. These small water systems are, by regulatory definition, PWSs based on the population that they serve. However, these systems have no responsible managing body or legal status. At the time of our last report, 3 orphan systems had been identified in the Commonwealth. In the past three years, we have achieved the inactivation of two of these and only one remains. Since the mid 70’s, Kentucky has successfully inactivated 1,275 PWSs, 356 of which were done since the inception of the CD Program in 1996. Small ineffective PWSs realized they could not afford to continue operating their systems in compliance with the SDWA requirements, so they agreed to decommission their systems and let large systems with adequate TMF capacity to serve their customers.

Kentucky’s drinking water program is not without upcoming challenges. Reduction in allocation of state and federal funds will place a strain on the DOW resources. Upcoming regulations (e.g. Groundwater Rule, Stage2/LT2) need to be formalized and incorporated into the drinking water program. In the last three years the DOW issued fewer NOV’s to PWSs because our staff dedicated lots of resources educating PWSs how to stay in compliance with the SDWA requirements.

KENTUCKY’S DWSRF AND OTHER CAPACITY DEVELOPMENT TOPICS

The 1996 SDWA Amendments were aimed at providing additional protection measures to ensure the safety of the nation’s drinking water. The amendments include requirements for states to develop strategy to help PWSs acquire and maintain technical, managerial, and financial capacity necessary to comply with the national primary drinking water regulations, and to ensure potential Drinking Water State Revolving Fund borrowers have sufficient capacity prior to receiving loan funds, unless the loan funds helps them acquire the needed capacity.

Over the last three years Kentucky’s DOW created a CD Section to carryout the capacity development provisions of the SDWA. This federally-funded section allows DOW to consistently evaluate the technical and managerial components required under the SDWA for new or existing systems. Highlights of the program are provided below:

- Staff evaluate new and existing water systems’ technical ability to comply with the SDWA by review of inspection reports, sanitary surveys, complaints, compliance data, hydraulic models, enforcement history, water availability, Public Service Commission reports, operator staffing/certification and any other applicable information available. Staff also coordinates sanction reviews, the prioritization and evaluation of DWSRF loan projects and environmental reviews.



- Once a system is deemed to lack capacity, staff uses resources to take the role of coordinating assistance to these types of facilities as a follow-up to program identification. A “capacity development plan” is to be developed for any facility that is deemed to lack capacity in any one of the three (technical, managerial, financial) areas. The plan will provide a list of capacity issues for each category found lacking capacity and recommendations as to short- and long-term goals for the systems to achieve capacity in those areas as well as a timeline to implement the improvements.
- Several PWSs have already been identified with systemic problems, including technical, managerial and financial capacity challenges. Even though the majority of these types of systems are in compliance with federal rules and existing regulations, they are clearly challenged in their overall capacity to manage the system. Some funding to address financial issues may be available through the DWSRF technical assistance and capacity development set-aside funds for contractual evaluation and implementation. The CD section evaluates the problems, determines if a technical assistance provider (such as a contractor) is necessary. If so, the technical assistance provider would develop an independent evaluation of the facility and a plan of action for achieving “capacity” and long-term compliance. This cooperative approach to addressing chronic problems with PWSs will be used in conjunction with the EPA-approved Drinking Water Capacity Development Strategy and should be further enforced by developing formal CD regulations.
- Another recent development is the free software developed and distributed by USEPA for small systems to implement an Asset Management program. The Check-Up Program for Small Systems (CUPSS) is a user friendly software package to help systems manage their assets to improve both managerial and financial capacity. The CD section in cooperation with KRWA and RCAP is delivering and training systems on the use of the free software to achieve and maintain financial capacity. For systems who can’t afford contractors to come in and develop plans for them, this is a great asset. This software fits in well as we try to promote the US EPA’s Sustainable Infrastructure Initiative, whose goal is to change the way the public views, values, and invests in water infrastructure.

Kentucky has mandated in Senate Bill 409 (from legislative session 2000) that public water will be available to all Kentuckians by the year 2020. However, the DOW does not have regulatory authority to compel any public water system, including cities, to provide potable water service to potential customers. The DOW will continue to strive to meet the goal set out by Senate Bill 409 by pursuing other state loan or grant programs and encouraging regionalization of drinking water systems.

The Cabinet administrators have developed an Operator Training and Certification (Op Cert) program through the Kentucky Division of Compliance Assistance. The Op Cert program provides training and issues certifications to ensure that individuals who operate drinking water systems are qualified and capable of performing their duties. The program presents a number of training opportunities for water treatment and distribution system operators throughout the Commonwealth. The following is a summary of 2004 activities and achievements:



- Days of CEU training = 54
- DW Certifications Issued = 837 (new or upgraded)
- DW Certification Renewals = 1,253 WTP, 1,320 Distribution
- Certification Preparation Course Days = 93
- Exams Given = 1,222

The Op Cert program also assists the Kentucky Board of Certification of Water Treatment and Distribution System Operators.

Kentucky's source water assessment and protection efforts have been very successful during this three-year reporting period. The DOW continues to successfully manage its statewide and system wellhead protection programs, and apply effective source water protection strategies. The following is a summary of these programs including their overall effectiveness.

Statewide wellhead protection efforts during the three-year reporting period include:

- Contaminant Source Inventories in Wellhead Protection Areas (WHPAs) have been put into the GIS system for potentially increased inspection activity and Groundwater Protection Plan activity.
- Since 2005, the Wellhead Protection Program has developed a five-year update for the wellhead plans currently in place so that updating the plans will be done according to the water supply planning regulations.
- Signage: Source water protection signs with emergency response phone numbers are located along major roadways that transect wellhead protection areas and surface water protection areas. Areas are being prioritized by susceptibility of the aquifer or intake. The DOW sign program has been completed for 90 groundwater and surface water systems.
- The wellhead protection program has nearly completed all of the systems wellhead protection plans and has now started working on five-year updates where wells have been added.

System wellhead protection efforts during the three-year reporting period include:

- Georgetown Municipal Water and Sewer System: This system is located in Scott County but the major portion of the groundwater basin for Royal Springs is located in Fayette County. Lexington Fayette Urban County Government (planning and zoning, environmental issues) has worked closely with the Georgetown Municipal Water and Sewer System on their wellhead protection efforts during monthly meetings.



- Hardin County Water District #1 has conducted yearly field days at the water treatment plant to show where the water treatment plant derives its source water from and how the landowners actions affect the source water.
- Trimble County Water District has been working with the DOW and LG&E with stream riparian work in their well field.
- Louisville Water Company utilizes both surface water intakes and a radial collector well located in the alluvium of the Ohio River. The system has worked with the Louisville Metropolitan Sewer Department to obtain a portion of the wellhead protection area to schedule sewer service that was not scheduled for several more years. Information pamphlets were distributed to all residents in the wellhead protection area concerning groundwater contamination issues. Louisville Water Company is currently adding 5 new collector wells to their water supply source. Their wellhead plan will be updated accordingly.
- Louisville Water Company also received a federal grant to work on a native species initiative so that pesticides will not be used in the wellhead protection area that is owned by Louisville Water Company.

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

- Defining substantial protection implementation for surface water systems and building a database for the contaminant source inventory with regards to the delineation of surface water systems.

REPORT AVAILABILITY TO PUBLIC

This Triennial Report to the Governor on Kentucky's CD Program for October 1, 2005 – September 30, 2008 is a requirement of the USEPA for primacy states. This report must be submitted to the USEPA and also made public. The DOW makes this report available to the citizens of Kentucky by:

- Posting the report on the DOWs Web site:
(<http://www.water.ky.gov/dw/capacitydevelopment>)
- Issuing a news release.
- Making the report available at DOW central and regional offices.

Anyone with comments, concerns or questions regarding this report may contact Leslie Harp at (502) 564-3410, extension 4842 and leslie.harp@ky.gov.

