

FY2012-2013 Small Systems Agency Priority Goal

Accomplishments Report



This page is intentionally left blank.

“ Success should be judged by results, and data is a powerful tool to determine results. We can't ignore facts. We can't ignore data. ”

President Barack Obama, July 24, 2009

Introduction

About Agency Priority Goals

The Obama Administration has embraced the power of goal-setting as a way to improve the Federal Government's performance and accountability to the American people. Federal agencies routinely establish a variety of performance goals and objectives to drive progress toward key outcomes to accomplish their public service missions. Long-term goals and objectives are typically outlined in agency strategic plans and annual goals in annual performance plans. Twenty-four Federal agencies also identified a limited number of two-year Agency Priority Goals (APGs) in the fiscal year (FY) 2013 President's Budget, aligned with their strategic goals and objectives. APGs target areas where agency leaders want to achieve near-term performance acceleration through focused senior leadership attention. Performance.gov allows the public, agencies, members of Congress, and the media the ability to view progress toward these APGs.

About EPA's FY2012-2013 Small Systems Agency Priority Goal

The U.S. Environmental Protection Agency (EPA) undertook a total of five APGs during FY2012-2013. The Small Systems APG was managed by the Office of Ground Water and Drinking Water (OGWDW) to focus on increasing state engagement to strengthen the capabilities of small drinking water systems.

FY2012-2013 Small Systems Agency Priority Goal Statement:

Improve public health protection for persons served by small drinking water systems by strengthening the technical, managerial, and financial capacity of those systems. By September 30, 2013, EPA will engage with twenty states to improve small drinking water system capability through two EPA programs, the Optimization Program and/or the Capacity Development Program.

More than 97 percent of the nation's 156,000 public water systems are classified as small systems, those serving fewer than 10,000 persons. Many small systems face a number of challenges to reliably provide safe drinking water to their customers. These challenges may include aging infrastructure, complying

with regulatory requirements, workforce shortages/high-turnover, increasing costs and declining rate bases.

The EPA's Office of Ground Water and Drinking Water works closely with state primacy agencies and other organizations to strengthen the capacity of small systems and improve their ability to sustainably provide safe drinking water to the public. These efforts include strengthening and targeting financial support to small systems, enhancing state Capacity Development programs and capabilities, and improving state participation in the Optimization program so that efforts focus on those systems most in need.

This Priority Goal is most appropriately measured by milestones, which are scheduled events signifying the completion of a major deliverable or a phase of work. While EPA works with every state to enhance compliance and long-term small system sustainability, specific states engaged with EPA to develop and track new activities that fit within the scope of this APG and could be used as milestones for measuring achievement of the goal during this two-year period. Quarterly reports (October 2012 – September 2013) were prepared to track EPA engagement with states through both the Capacity Development and Optimization programs.

FY2012-2013 Small Systems Agency Priority Goal Activities

Capacity Development Program

The 1996 Safe Drinking Water Act (SDWA) Amendments established a strong emphasis on enhanced water system management to achieve and maintain technical, managerial and financial (TMF) capacity of water systems. The Capacity Development Program establishes a framework within which states and water systems can work together to achieve the SDWA's public health protection objectives. The Capacity Development Program offers states the flexibility to choose a variety of approaches to strengthen water system sustainability. The areas of focus reported on for this APG include activities related to Asset Management, Capacity Development Program Management, Drinking Water Program Collaboration, Energy Efficiency, Non-Community Water Systems, Water System Partnerships and Water Sector Workforce. The project descriptions below present the activities that EPA launched under each of these themes and the actions that states took to further these initiatives.

Asset Management

EPA: EPA convened the State/EPA Asset Management Workgroup from June 2012 – June 2013. Twenty-six states with nearly 50 staff representing the Capacity Development, Operator Certification and Drinking Water State Revolving Fund (DWSRF) programs volunteered to participate in this workgroup to discuss best practices in promoting asset management to small drinking water systems. Resulting from workgroup discussions, the "Reference Guide for Asset Management Tools" was developed to highlight components/practices to include in a small system asset management plan. This

guide was released in 2014. *For more information contact Sonia Brubaker, EPA Headquarters Capacity Development Coordinator, brubaker.sonia@epa.gov.*



The Kansas Department of Health and the Environment (KDHE) provided six asset management training sessions using the “AM KAN Work! Asset Management and Energy Management Manual” through contracts with the Wichita State University Environmental Finance Center (Wichita State EFC) and Kansas Municipal Utilities (KMU). KMU provided follow-up assistance to 36 systems and worked with 18-20 systems to begin developing asset management plans. In addition, KDHE facilitated an asset management user group to focus on asset management collaboration between large and small systems. *For more information contact Bob Dunlevy, EPA Region 7 Capacity Development Coordinator, dunlevy.robert@epa.gov.*

EPA: EPA provided regular webinar training and technical support for the [Check Up Program for Small Systems \(CUPSS\)](#) asset management software. A total of 19 states attended the CUPSS Train-the-Trainer webinar series held in March 2012, September 2012, February 2013, and September 2013. In addition, to support the growing community of CUPSS users and trainers, quarterly interactive CUPSS Community Calls were initiated to provide updates on CUPSS enhancements, presentations on case studies, tips for trainers, and presentations by speakers who have used the CUPSS software, either as a water system operator, a technical assistance provider or state regulator. EPA held three CUPSS Community Calls in FY2013. *For more information contact Sonia Brubaker, EPA Headquarters Capacity Development Coordinator, brubaker.sonia@epa.gov.*



As a result of continued training and support from EPA Headquarters on the [Check Up Program for Small Systems \(CUPSS\)](#), the New York Department of Health (NYDOH) incorporated CUPSS in their operator training. The training sessions included a discussion on asset management and how to use the CUPSS software to implement an asset management plan. NYDOH conducted 14 small system operator training sessions between August 1, 2012, and December 31, 2012, two training sessions on water system sustainability through the use of CUPSS in July 2013, and worked with the New York Rural Water Association to develop CUPSS training sessions for operators and circuit riders. *For more information contact Bruce Lin, EPA Region 2 Capacity Development Coordinator, lin.bruce@epa.gov.*

Capacity Development Program Management

EPA: Building on the work of the State/EPA Managerial Capacity Workgroup which met between November 2010 – November 2011, EPA released the “[Assessing Water System Managerial Capacity](#)” guide and held a webinar to showcase the joint state/EPA efforts in developing products that share state best practices to strengthen managerial and financial capacity at small systems. Topics included assessing managerial capacity, asset management and board member training. Staff from 40 states attended this webinar. *For more information contact Sonia Brubaker, EPA Headquarters Capacity Development Coordinator, brubaker.sonia@epa.gov.*



The New Mexico Environment Department revised their previous water system board training to include the following new topics that were discussed in past national Managerial Capacity Workgroup meetings: 1) Articles, Bylaws and Rules, 2) Effective Board Meetings, and 3) Infrastructure Project Funding. Two trainings were completed in November and December 2012. *For more information contact Amy Camacho, EPA Region 6 Capacity Development Coordinator, camacho.amy@epa.gov.*

The Washington Department of Health developed an online [Water System Capacity Assessment](#) tool to better understand small systems' managerial and financial capacity across multiple Office of Drinking Water programs. Training and materials were provided to surveyors on promoting the online capacity assessment during sanitary surveys. In addition, articles were published in state and local drinking water newsletters to promote the use of the assessment tool. *For more information contact Bill Chamberlain, EPA Region 10 Capacity Development Coordinator, chamberlain.william@epa.gov.*



EPA Region 1 worked with the New England Interstate Water Pollution Control Commission (NEIWPC) and the Maine Drinking Water Program to develop and distribute the "Business Owner's Guide to Complying with Drinking Water Regulations" aimed at increasing compliance with drinking water regulations. *For more information contact Jeff Butensky, EPA Region 1 Capacity Development Coordinator, butensky.jeff@epa.gov.*

EPA Region 1 worked with all New England states on the development of a [Water Board Member Guidelines Training Manual](#) to be used as a companion tool with the upcoming web-based Water Board Training. *For more information contact Jeff Butensky, EPA Region 1 Capacity Development Coordinator, butensky.jeff@epa.gov.*



Drinking Water Program Collaboration

EPA: Building on the work of the State/EPA Collaboration Workgroup which met during 2011, EPA held a webinar to highlight state examples in collaborating among multiple drinking water programs and posted the [Drinking Water Program Collaboration Fact sheets](#) to EPA's website. Staff from 42 states attended this webinar. *For more information contact Steve Hogye, EPA Headquarters, hogye.stephen@epa.gov.*



EPA Region 6 worked with the New Mexico Environment Department to update their Capacity Development Strategy to revise the DWSRF Loan Fund procedures for processing Project Interest Forms and interacting with the New Mexico Finance Authority. *For more information contact Amy Camacho, EPA Region 6 Capacity Development Coordinator, camacho.amy@epa.gov.*

Systems submitting a funding request form through the Texas Water Infrastructure Coordination Committee (TWICC) are provided technical, managerial and financial assistance when needed. Committee members are engaged in discussions regarding the selection of systems needing capacity assistance and tasked through the Texas Commission of Environmental Quality's contract with the Texas Rural Water Association. Since the inception of TWICC, there are 69 systems that have been discussed and/or have been provided assistance; these include systems on the current TWICC Potential Projects tracking list as well as outreach to systems to participate in the DWSRF Very Small System Pilot Project. *For more information contact Amy Camacho, EPA Region 6 Capacity Development Coordinator, camacho.amy@epa.gov.*



EPA Region 7 worked with the Missouri Department of Natural Resources to begin the analysis needed to update their Capacity Development Strategy. This analysis was done to develop measures to better focus scarce resources, including the increased use of the DWSRF set-asides for helping small systems. *For more information contact Bob Dunlevy, EPA Region 7 Capacity Development Coordinator, dunlevy.robert@epa.gov.*

EPA: As part of the [Memorandum of Agreement between EPA and the U.S. Department of Agriculture \(USDA\)](#) that was signed in 2011, EPA met with USDA to discuss outreach and marketing strategies for the newly released "[Rural and Small Systems Guidebook to Sustainable Utility Management](#)" and accompanying "[Workshop in a Box](#)". *For more information contact Sonia Brubaker, EPA Headquarters Capacity Development Coordinator, brubaker.sonia@epa.gov.*



Under the Effective Utility Management (EUM) initiative, EPA Region 1 worked with the New England states and The Cadmus Group to conduct approximately 50 wastewater and drinking water on-site visits to help water system staff complete EUM self-assessments. New tools for small systems were also developed including an Excel-based Asset Management and Debt Capacity Spreadsheet and Guidebook, a Comprehensive Resource Guide and a Communications Strategy Guide. *For more information contact Jeff Butensky, EPA Region 1 Capacity Development Coordinator, butensky.jeff@epa.gov.*

Energy Efficiency

EPA: Water and wastewater treatment and pumping often represents the largest energy demand for a city or county government, and energy represents the largest controllable cost of providing water/wastewater services. EPA held two webinars to promote the new [Energy Use Assessment Tool](#) that small water and wastewater systems can use to identify high energy-using assets at their utilities. Staff from 39 states attended these webinars. *For more information contact Adrienne Harris, EPA Headquarters, harris.adrienne@epa.gov.*



The Kansas Department of Health and the Environment (KDHE) contracted with the Wichita State University Environmental Finance Center (Wichita State EFC) on an energy efficiency project to begin developing five case studies of small systems in southeast Kansas. *For more information contact Bob Dunlevy, EPA Region 7 Capacity Development Coordinator, dunlevy.robert@epa.gov.*

EPA Region 4, along with the Tennessee Department of Environment and Conservation and other partnering organizations in Tennessee, successfully demonstrated a collaborative approach for assisting water and wastewater utilities in significantly reducing their energy demand and carbon footprint. Seven participating utilities documented collective energy savings of more than 5 million kWh per year, equating to cost savings of more than \$350,000 per year and a carbon dioxide emissions equivalent reduction of almost 5,000 tons per year. EPA Region 4 developed an Energy Efficiency Roadmap to replicate the Tennessee results in other states. In addition, discussions among U.S. Department of Energy (DOE), EPA Headquarters, and EPA Region 4 staff revealed the potential for the Region to gain support from DOE's Industrial Assessment Centers (IACs) in conducting energy assessments at water and wastewater systems. DOE maintains five IACs and two additional affiliates within the area encompassing EPA Region 4. *For more information contact Dale Froneberger, EPA Region 4 Capacity Development Coordinator, froneberger.dale@epa.gov.*



Non-Community Water Systems (NCWSs)

EPA: EPA convened a State/EPA Non-Community Water System (NCWS) Workgroup in June 2012 to engage in discussions on the challenges and state best practices for assisting transient and non-transient non-community water systems to ensure safe water. Eight states volunteered to join this workgroup to discuss the technical, managerial and financial capacity issues faced by NCWSs. *For more information contact Steve Hogue, EPA Headquarters, hogue.stephen@epa.gov.*



EPA Region 8, several Wyoming state agencies and the Wyoming Association of Rural Water Systems partnered to provide a State Water Circuit Rider Program. The Water Circuit Riders are focused on assisting small transient public water systems to provide safe water, operate more efficiently and maintain compliance with the Safe Drinking Water Act. *For more information contact Kendra Morrison, EPA Region 8 Capacity Development Coordinator, morrison.kendra@epa.gov.*

Water System Partnerships

EPA: As part of the [Memorandum of Agreement between EPA and the U.S. Department of Agriculture \(USDA\)](#) that was signed in 2011, a 4-part webinar series was co-hosted by the two agencies during 2012 to showcase state and local [water system partnerships](#) and how state regulators and funders can encourage these partnerships. This initiative focused on partnerships between small water systems including sharing equipment, management restructuring and consolidation. Staff from 47 states attended at least one of these four webinars. *For more information contact Sonia Brubaker, EPA Headquarters Capacity Development Coordinator, brubaker.sonia@epa.gov.*



The Texas Commission of Environmental Quality (TCEQ), New Mexico Environmental Finance Center (NM EFC) and EPA Region 6 are working with the City of Waco and surrounding smaller municipalities to develop a plan to regionalize the water systems to increase system compliance and viability. Specific goals of the project include 1) getting updates on the arsenic compliance projects around the City of Waco, 2) facilitating and assisting in continued planning, collaborating and funding to keep the public water systems in compliance, and 3) developing a train-the-trainers module and template for TCEQ, EPA, and assistance provider staff for future compliance/regionalization compliance projects. *For more information contact Amy Camacho, EPA Region 6 Capacity Development Coordinator, camacho.amy@epa.gov.*

Water Sector Workforce

EPA: Building on the work of the State/EPA Workforce Workgroup which met during 2011, EPA posted a compilation of [Workforce Training fact sheets](#) describing training programs, internships and mentoring programs that can help new operators enter the water sector, as well as enhance the skills and knowledge of experienced operators. Two webinars were held showcasing selected examples of workforce programs from these fact sheets. Staff from 23 states attended these webinars. *For more information contact Matt Reed, EPA Headquarters Operator Certification Coordinator, reed.matthew@epa.gov.*



Through a grant to the New England Water Works Association (NEWWA) and the Connecticut American Water Works Association (CT AWWA), EPA Region 1 coordinated with the Connecticut Department of Public Health to support student internships with major water suppliers in Connecticut, with a focus on youth from disadvantaged communities. One week summer Water Boot Camps were held in environmental justice (EJ) communities in New Haven, CT, and Hartford, CT. Hosted and trained by the neighboring water suppliers and CT AWWA, a total of more than 20 students were introduced to water management, treatment and careers in the water sector. *For more information contact Jeff Butensky, EPA Region 1 Capacity Development Coordinator, butensky.jeff@epa.gov.*

EPA Region 1 worked with the Massachusetts Department of Environmental Protection (MassDEP) to develop the Drinking Water Operator Teacher's



Toolkit which includes resource information (e.g., EPA documents and products) to help teachers and students in high school and college learn about available drinking water operators training courses. In addition, a cooperative agreement between EPA Region 1, Roxbury Community College (Boston, MA) and the Massachusetts Water Works Association was developed to embed two new drinking water certification courses into the college curriculum. On October 2, 2012, the SPLASH Conference was held in the Reggie Lewis Center in Roxbury, MA. This SPLASH Conference had water demonstrations, exhibits by water professionals, and tours of a drilling rig and the EPA regional laboratory. Over 100 Boston-area youth attended. EPA Region 1 and MassDEP were two of the sponsors for this event. *For more information contact Jeff Butensky, EPA Region 1 Capacity Development Coordinator, butensky.jeff@epa.gov.*



Based on examples from EPA's [Workforce Training fact sheets](#) that were released in 2012, Missouri developed two hands-on training courses to provide the opportunity for high school and college students to learn about jobs in the water sector. EPA Region 7 awarded an \$181,638 competitive Hometown Grant to St. Louis Community College and a \$15,000 Hometown Grant to Lincoln University to develop operator training curriculums for these workshops.

Missouri American Water hired a professional company to develop a video of the boot camp and activities at Lincoln University. A total of 32 students participated in these training events. *For more information contact Bob Dunlevy, EPA Region 7 Capacity Development Coordinator, dunlevy.robert@epa.gov.*

Region 3 worked with the Pennsylvania Department of Environmental Protection and the Philadelphia Water Department to develop a Drinking Water Operator Curriculum to be used by vocational high schools and community colleges. It gives students an introduction to the water industry through a 4-year program that will include a summer internship at a local public water utility during the junior and senior years. The expected result is that students will become eligible to sit for the Pennsylvania Operator in Training Exam. This curriculum was developed to help meet future water sector workforce demands by introducing the profession as a career option in local high schools. *For more information contact Ghassan Khaled, EPA Region 3 Capacity Development Coordinator, khaled.ghassan@epa.gov.*



EPA: EPA signed a new [Memorandum of Understanding \(MOU\) with the U.S. Department of Veterans Affairs \(VA\)](#) in 2012 to promote water sector workforce careers for disabled veterans. Three webinars were held to educate state environmental agencies, local Veteran Affairs counselors and water utilities on workforce opportunities for veterans. Staff from 28 states attended at least one of these webinars. *For more information contact Matt Reed, EPA Headquarters Operator Certification Coordinator, reed.matthew@epa.gov.*



Staff from the Montana Department of Environmental Quality presented on EPA's national webinar held in July 2012 to help EPA educate local Veterans Affairs counselors about career opportunities in the water sector. Montana

also presented on a webinar held in September 2012 to promote state Operator Certification program coordination with local Veterans Affairs offices. *For more information contact Kendra Morrison, EPA Region 8 Capacity Development Coordinator, morrison.kendra@epa.gov.*

The Washington Department of Health developed a multi-agency partnership to steer returning service members and disabled veterans to water sector jobs and potential careers. Utilities that hire veterans can receive financial assistance to pay the veterans as they get the hands-on experience needed for water or wastewater operator certification. To promote this initiative, Washington developed a brochure entitled "[Career Opportunities for Veterans in the Water Sector](#)" and distributed it at three job fairs in 2013. For more information contact Bill Chamberlain, EPA Region 10 Capacity Development Coordinator, chamberlain.william@epa.gov.



Optimization Program

The Optimization Program (also known as the Area Wide Optimization Program, AWOP) provides a systematic approach for states to assess small water system performance, deliver needed technical assistance, measure the results of those efforts and transfer skills to water system operators to maintain water system performance. The Optimization program helps states prioritize their technical assistance resources by identifying which public water systems are in most need of help (based on water quality and public health risk) and most effectively apply a range of compliance and technical assistance tools to enable small water systems to meet (and sustain) compliance requirements and optimization goals. This is being done through a series of ongoing field training activities. During this APG period the optimization program focused on engaging additional states, as well as promoting optimization tools in the areas of Distribution System Optimization (DSO) and Enhanced Backwashing. *For more information contact Richard Lieberman, Optimization Program Team Leader, lieberman.richard@epa.gov.*



Program Growth (new states)

During this APG period three states (Connecticut, New Mexico and Florida) either began implementing AWOP or re-engaged with the Optimization Program, recognizing the value of the program despite their budgetary constraints. All states are currently working to prioritize their water systems for technical assistance (based on public health risk), as they learn more about the optimization program and the tools that are available to their systems.

Distribution System Optimization (DSO)

EPA: EPA developed an approach for evaluating and assessing water quality in water distribution systems called the Comprehensive Performance Evaluation (CPE). The Distribution



System Optimization (DSO) CPE protocol was piloted by EPA in partnership with the State of Pennsylvania. The resulting CPE protocol was demonstrated to the states that participate in the EPA Region 4 Optimization Program; they have subsequently begun implementing DSO concepts to provide compliance assistance to their water systems. Additionally, EPA has piloted DSO training for distribution system operators, starting with seven small water systems in Alabama. The Alabama Department of Environmental Management conducted this training with additional water systems, and several states (Arkansas, Kentucky, South Carolina) have begun their own distribution system optimization training activities targeted towards smaller water systems and to address compliance concerns.

































The Pennsylvania Department of Environmental Protection developed an active DSO program, with a dedicated staff member in this area. The program builds on the DSO development work EPA conducted in the state, and incorporates many tools that help water systems better understand water quality in their distribution system, and what can be done to improve and sustain water quality. The state also proactively works with systems to implement DSO approaches to help prevent disinfection byproduct (DBP) rule violations.

Enhanced Backwashing

EPA: EPA has demonstrated an enhanced backwashing procedure that water systems can use to improve the effectiveness of their filter backwash, resulting in improved water quality leaving the treatment plant and safer water at the consumer's tap. This approach is being utilized by several states (e.g., Alabama, North Carolina), and several more have plans to pilot this. In addition to enhanced water quality, this process can reduce the amount of water "wasted" during backwashing – conserving resources and resulting in cost savings for many systems. This no-cost optimization technique can be used by any system that has the flexibility to adjust their backwash flow rate and willingness to implement it.

Goal Achievement

Progress toward achieving this APG can be seen by the number of states that EPA successfully engaged with over the FY2012-2013 timeframe. Between the Capacity Development and the Optimization Programs, EPA engaged with a total of 25 states to improve small drinking water system capability under the parameters of this goal. EPA surpassed the expectations for this goal and also worked with other states that participated in workgroups and webinars not specifically listed below. The states that are captured under this goal include the following:

<i>State</i>	States that submitted Capacity Development projects for quarterly reports	States that implemented a new Optimization Area	States that were new/reengaged in the Optimization program
<i>Alabama</i>			
<i>Arkansas</i>			
<i>Connecticut</i>			
<i>Florida</i>			
<i>Iowa</i>			
<i>Kansas</i>			
<i>Kentucky</i>			
<i>Maine</i>			
<i>Maryland</i>			
<i>Massachusetts</i>			
<i>Missouri</i>			
<i>Montana</i>			
<i>New Mexico</i>			
<i>New York</i>			
<i>North Carolina</i>			
<i>Oklahoma</i>			
<i>Oregon</i>			
<i>Pennsylvania</i>			
<i>South Carolina</i>			
<i>Tennessee</i>			
<i>Texas</i>			
<i>Virginia</i>			
<i>Washington</i>			
<i>West Virginia</i>			
<i>Wyoming</i>			

Total = 25 States

Future Activities

The successful achievement of the FY2012-2013 Small Systems Agency Priority Goal demonstrates the hard work that EPA and all the states have been doing over the past decade and more to assist small systems. Long-standing relationships prior to this goal period built trust and partnering opportunities that will continue to thrive in the coming years. The FY2015 President's Budget included a follow-on Small Systems Agency Priority Goal to formalize this continued success.

FY2014-2015 Small Systems Agency Priority Goal Statement:

Improve public health protection for persons served by small drinking water systems, which account for more than 97 percent of public water systems in the U.S., by strengthening the technical, managerial, and financial capacity of those systems. By September 30, 2015, EPA will engage with an additional ten states (for a total of 30 states) and three tribes to improve small drinking water system capability to provide safe drinking water, an invaluable resource.

Quarterly reports will be prepared for the FY2014-2015 Small Systems Agency Priority Goal to document new milestone achievements. More information on this goal can be found on the Performance.gov website.