

COLORADO CAPACITY DEVELOPMENT WORK PLAN SFY 2008-2010

INTRODUCTION

The Drinking Water Program, under the management of the Water Quality Control Division (Division) of the Colorado Department of Public Health and Environment (CDPHE) is the state agency granted primary enforcement authority (primacy) for implementing the regulatory provisions of the Safe Drinking Water Act (SDWA). Section 1452-k of the 1996 amendments to the Safe Drinking Water Act authorizes the primacy agency to utilize set-aside funds from the State Revolving Loan Fund (SRF) capitalization grant to implement a Capacity Development Program. The Colorado Capacity Development Program has reserved the maximum available amount of funds from the SRF capitalization grant to provide funding for capacity development activities. The amount of the local assistance set-aside is capped at 10% for each of the local assistance programs, which result in \$1,449,700 (10%) for the FFY07 capitalization grant received from EPA. The Colorado Drinking Water Program intends to use these funds to carry out its Capacity Development Strategic Plan. In past years, portions of the grant funds set aside for the Capacity Development Program were not fully utilized. Some of these funds will now be utilized in the budgets for state fiscal years 2008-2010. Table 1 shows the allocation of these funds to personnel, operations, and contracts for SFY 2008-2010. A summary of fund expenditures and annual budgets is also available in the annual Drinking Water Revolving Fund Intended Use Plan documents. The budget is based on an assumption that the SRF will continue to be funded, and set-asides will remain at the level currently allowed. It is important to note in the budget presented in Table 1, that funds will not cover all expected expenditures through SFY 2010. The allocation of personnel and contracts will be reexamined during the next two years, and projects will be deferred or personnel reassigned to other fund sources in order to retain a balanced budget.

The Capacity Development Strategic Plan is a companion document that outlines three Key Focus Areas and nine Strategic Goals for the program. These reflect a connection to goals and strategies defined by the division, department, and the USEPA. This work plan document sets forth a description of planned activities, roles and responsibilities, funding amounts, expected outputs, outcomes and deliverables, timeframes, and a plan for evaluating success. Additionally, there is an emphasis on uniting this work plan with the Strategic Plan, as annotated by references to Key Focus Areas and Strategic Goals.

The following are the Capacity Development Program's three Key Focus Areas:

- Program Administration
- New Water Systems
 - Conduct New Water System Capacity Reviews and ensure adequate capacity exists in new systems through training and technical assistance
- Existing Water Systems
 - Provide education and training to meet the needs of water system personnel
 - Apply appropriate measures to ensure success

- Develop mentoring program from large systems to smaller systems
- Use resources efficiently with focus on continuous improvement
- Evaluate capacity needs of water systems and provide direct assistance to them
- Integrate sustainability into projects wherever possible
- Establish and foster partnerships with other organizations

The nine Strategic Goals of the Capacity Development Program are:

Strategic Goal 1 – Provide a system of education, training, and technical assistance that provides assurance to the public that the drinking water provided to them by their public drinking water system is consistently safe.

Strategic Goal 2 – Develop and apply a measurement system for all Capacity Development Projects to ensure the program has a measurable and documented beneficial impact on public health, compliance rates, and public trust in the state drinking water program and in their own public water supplier.

Strategic Goal 3 – Apply a proactive approach to systems of concern, so these systems are provided the tools and resources needed to regain compliance and full capacity.

Strategic Goal 4 – Develop a large-system mentoring program that will support collaboration among all drinking water systems, assist those smaller systems understand their problems and potential solutions, and use performance based approaches to developing training.

Strategic Goal 5 – Use available resources in an efficient and timely manner, with a focus on continuous improvement of the program, relying on the CPEX model of the Division.

Strategic Goal 6 – Develop and distribute an effective needs assessment to drinking water systems of Colorado, evaluating the technical, managerial and financial needs, capital needs, and impact of shortfalls on system performance on the health of the populations served.

Strategic Goal 7 – Integrate sustainability into program projects wherever possible, to ensure that resource expenditures develop ongoing programs that provide measurable impacts, and do not result in short-term, single project.

Strategic Goal 8 – Ensure all new and proposed new systems are developed with adequate technical, managerial, and financial capacity to remain a viable and sustainable drinking water system into the foreseeable future.

Strategic Goal 9 – Establish and foster partnerships with other federal, state, and local drinking water organizations.

KEY FOCUS AREA: PROGRAM ADMINISTRATION

The activities performed in this Key Focus Area contribute to Strategic Goals 2, 3, 5, 6, 7, and 9.

The Drinking Water Program relies on the Capacity Development Program for staff resources as well as contracts to implement the Capacity Development Strategic Plan, as expanded and defined in this work plan. Staffing has increased over the past several years, to now include two coaching positions, that provide direct assistance to drinking water systems. In addition, in 2009, we will add one additional person to manage the sanitary survey program, track data, and ensure deficiencies are corrected, particularly for the large number of non-community ground water sanitary surveys conducted by the Consumer Protection Division of CDPHE, and by local health departments, under contracts with the Capacity Development Program. The staff supported by the capacity development and program management assistance set-asides performs a range of duties associated with the implementation of activities in the other two Key Focus Areas, including:

- Hiring and training State capacity development staff
- Preparing guidance documents, work plans, standard operating procedures, and long-term strategies
- Revising approval processes, sanitary surveys, and other regulatory mechanisms to better address capacity related concerns
- Targeting efforts through the Systems of Concern initiative that identifies and prioritizes water system that would most benefit from capacity development training or one-on-one coaching
- Providing direct training and technical assistance to operators and water system staff in a group setting or coaching one-on-one
- Obtaining stakeholder input on how to best develop a capacity development program
- Conducting outreach programs to educate water suppliers and the general public on capacity development issues
- Developing evaluation processes to assess the success of capacity development efforts
- Preparing contracts and using consultants to assist in capacity development activities

While it is not practical to itemize each of the legitimate expenses during a three-year period for this Capacity Development Work Plan, to the extent that specific costs can currently be predicted, they are outlined in this document. In the event that additional or substitute activities need to be conducted or equipment needs to be purchased, the work plan will be revised and resubmitted to EPA for approval if any one change exceeds \$100,000, or if individual additions to any category of expenditures in the aggregate exceed \$500,000 over the life of the work plan.

KEY FOCUS AREA: NEW PUBLIC WATER SYSTEMS

The activities performed in this Key Focus Area contribute to Strategic Goals 1, 6, and 8.

New public water systems must meet a set of technical, managerial, and financial capacity criteria described in the New System Capacity Planning Manual, which is available in hard copy from the Drinking Water Program and on the Internet at:

<http://www.cdph.state.co.us/wq/drinkingwater/NewSystems.html>. The New System Water Capacity Planning Manual is designed to help new community and non-transient non-community water systems comply with all applicable requirements and demonstrate present capacity and the ability to maintain that capacity. It provides the criteria the Drinking Water Program uses to evaluate the capacity of a new public water system. No significant revisions to existing requirements, procedures, or references are currently anticipated. If significant revisions become necessary, this work plan will be revised to provide necessary resources to make the revisions. Review of each proposed water system includes review of the detailed plans and specifications, review of a comprehensive TMF Capacity survey prepared by the system, and continued review of the compliance history of the new systems, once they are operational.

While recent Capacity Development Annual Reports indicate the vast majority of these new systems remain in compliance during the initial three-year period that they are monitored, we still see many of these systems struggle with their understanding of the regulations and all the things they must do to remain in compliance. Therefore a pilot program will be initiated that will provide direct assistance to these systems, explaining their requirements, helping them understand the regulations, and assisting them with completing the required steps. This assistance will be handled through group settings as well as one-on-one assistance, will use the 7 Guidance Documents, and will be delivered by the Drinking Water Capacity Building Coaches, appropriate CADM Rule Managers, and Drinking Water Engineers. The anticipated cost of this effort is \$20,000 plus staff time and effort.

New public water systems also benefit from many of the activities outlined in the next section of this document.

KEY FOCUS AREA: EXISTING PUBLIC WATER SYSTEMS

The activities performed in this Key Focus Area contribute to Strategic Goals 1, 3, 4, and 6.

Compliance Assistance

- Response to public water systems questions – The capacity development set-aside provides funding to support staff assigned to the Compliance Assurance and Data Management (CADM) and Engineering Sections, and the Outreach & Project Assistance Unit to assist Public Water Systems directly. Assigned staff respond to questions from public water systems concerning new regulations, compliance issues, appropriate treatment operations and technologies, and provide system representatives with system-specific technical assistance.
- Informational materials preparation and dissemination- Effective information dissemination is necessary to assist public water systems to achieve and maintain capacity. Timely information helps systems to comply with existing SDWA regulations,

and to anticipate upcoming regulatory requirements. Projected activities include both preparation and delivery of written materials, and improvements and modifications to the drinking water database to provide the program the ability to provide information to public water systems. The total anticipated cost of these efforts is \$345,000 over the 3 years of this work plan, distributed to individual projects discussed below.

- SWIFT/SDWIS integration for data input, quality assurance, and report generation. This effort was initiated in 2005 with the installation of software, the purchase of field hardy tablet computers and training for all field inspectors within the Drinking Water Program. Additional effort to ensure this tool is available for other types of inspections, such as TMF assessments and assistance, security evaluations, etc. will require expansion of the database. In addition, with the conversion of SDWIS to SWR1, and soon to SWR2, we need to keep the SWIFT tool up to date. These efforts will require \$50,000 each year. In addition, software support and maintenance requires \$15,000 per year.
- Web Page Improvements - The capacity development set-aside will fund efforts to continue improving and updating the Colorado Drinking Water Program web pages. These improvements will help to keep regulated water utilities and the public abreast of information pertaining to public water system capacity. Information to be provided via web may include Consumer Confidence Reports, Sanitary Survey results, SWAP Reports, CPE Reports, Compliance Reports, etc. In addition, Consumer Confidence Report templates are distributed to all community water systems, and that software will need to be revised to accommodate SWR1. The Drinking Water Program anticipates spending up to \$50,000 annually for these services.
- The Drinking Water Program has initiated a communication newsletter, to be distributed to all public water systems and other interested parties on a quarterly frequency. This newsletter informs systems of upcoming deadlines, training opportunities, and contains compliance assistance articles and other information regarding the Capacity Development Program. The newsletter is distributed via paper copies, but is also placed on our Internet pages to make it available to everyone.
- Sanitary Surveys – community and non-community systems - Capacity development set-aside funds have been approved for and allocated to Engineering Section staff and Consumer Protection Division (CPD) efforts to conduct sanitary surveys. Capacity development set-aside funding supports sanitary surveys conducted by the Engineering Section for up to 38% of the time (and other associated costs) required to perform sanitary surveys, do follow-up activities, and provide assistance to the water systems while on site. This allocation represents the portion of new sanitary survey content requirements required for an eight-part survey mandated by the Interim Enhanced Surface Water Treatment Rule's primacy requirements, the new requirement of the Long Term 2 and Stage 2 rules, and the new requirements of the Ground Water Rule. Examples of technical

assistance include discussing sampling techniques, safety and security concerns, and calibration and proper use of equipment.

Non-community ground water sanitary surveys are completed through contracts with the Department's CPD, and contracts with Local Health Departments, and counties for field evaluations of non-community ground water systems. The capacity development set-aside funding is used to pay for these sanitary surveys. Where organized county health departments do not exist, or where existing counties desire not to participate in this effort, CPD staff will perform the sanitary surveys. Due to the large number of non-community groundwater systems, the Drinking Water Program anticipates that up to \$175,000 of capacity development set-aside funds will be required to implement this effort annually.

Public Water Systems Assessments

- The Drinking Water Program is continuing a project started in year 2001 to conduct evaluations of surface water treatment plants based on the handbook developed by EPA titled, "Optimizing Water Treatment Plant Performance Using the Composite Correction Program." Comprehensive Performance Evaluations have been conducted in surface water plants not meeting the 3-log removal or inactivation requirement of the Surface Water Treatment Rule. Colorado has completed over 100 Comprehensive Performance Evaluations and plans to continue providing Comprehensive Performance Evaluations to surface water systems requesting assistance and those systems that trigger the requirement for a CPE under the Interim Enhanced Surface Water Treatment Rule. However, we will change the focus of this effort, and in addition to additional new CPE's, we will review the progress of plants that have had previous CPEs. A contract will be established to prepare a report on the results of this effort, and to identify candidate systems for a Comprehensive Technical Assistance follow-up to the original CPE. The Drinking Water Program anticipates that the effort will require up to \$200,000 of capacity development set-aside funds annually to implement this effort.
- As part of the Systems of Concern project, the Drinking Water Program has hired a contractor to conduct Technical, Managerial, and Financial (TMF) assessments of selected water systems targeted to receive assistance. The information gained from these TMF assessments is used to identify the technical assistance that will be needed by the system to ensure it has sufficient capacity. The Drinking Water Program will renew this effort with another solicitation for contractors during 2008, and will develop a contract that can extend over three years. The Drinking Water Program anticipates that the effort will require up to \$100,000 of capacity development set-aside funds annually to implement this effort.

Source Water Assessment and Protection (SWAP) Program

- The initial source water assessments for all public water systems have been completed with funding from previous capitalization grants. However, provisions for continued assessment and protection planning activities have only been specifically identified for

groundwater systems under the Wellhead Protection Program. The portion of the SWAP Program for surface water systems will be provided from the capacity development set-aside. Since the program is split between groundwater and surface water systems, we have proportioned the total SWAP expenditures between Wellhead Protection and Capacity Development based on the number of surface water and groundwater systems in Colorado. This joint funding strategy allows the Colorado Drinking Water Program to effectively implement a comprehensive Source Water Assessment and Protection program.

Major activities to be conducted include: integrating the Wellhead Protection Program with the Source Water Protection Program, source water assessment report and protection planning outreach, source water protection plan development and implementation support, source water assessment report completions, revisions and future development, and Safe Drinking Water Information System (SDWIS) and Other Data Source Improvements. Program costs for staff, operating and travel, contractual services, grant services, and data system maintenance will be apportioned as described above. Capacity development set-aside funding up to 30% of the annual SWAP budget (Wellhead Set Aside + Capacity Development Set Aside) will be used to support the SWAP program objectives for surface water systems. The 2008 Drinking Water Revolving Fund Intended Use Plan indicated this funding amount would be \$182,864 in 2008, and it is anticipated that amount may increase to the full 30% in future years. Program activities will be split across multiple positions and a total of 0.9 FTE will be supported for these activities by the capacity development set-aside.

Operator Training

Training involves providing the means for public water system owners and operators to gain the knowledge, skills, and abilities they need to properly maintain and operate a public water system to ensure continuous regulatory compliance and safe drinking water. Training is conducted on the basic requirements of water system operation and on topics necessary to keep abreast of new treatment technologies and regulatory requirements. Various training programs provided by different training entities have existed in Colorado to address these needs for some time. Historically, many of these important training events have been supported by the drinking water program through various set-asides. During the timeframe for this work plan, the Drinking Water Program is developing a comprehensive training curriculum that will be designed to cover all the topics required by competent operators.

- During 2007, the Capacity Development Program developed and distributed regulatory guidance documents based on the type of system, either community or non-community, and the source of water – ground or surface water, since the regulations for each type of system are quite different. Now that these documents are available, we need to develop a series of training courses to deliver that material to water system managers and operators, so they fully understand their responsibilities. This training will require about \$150,000 during 2009. These documents will also need to be updated to incorporate new rules, which will be accomplished in 2010 or 2011.

- The Drinking Water Program plans to continue to work with third party providers to develop training and to sponsor training workshops covering appropriate topics, which may include understanding new rules, developing and following a monitoring plan, record keeping and reporting, sampling, sample handling and chain of custody, preparation for sanitary surveys, proper design planning, CT calculations, Ground Water Rule, and Public Education Programs, as well as other appropriate topics on water system operation, management or financing as needed throughout the state through SFY10. The Drinking Water Program anticipates that this training effort will require up to \$100,000 annually of capacity development set-aside funds to implement.
- One activity outlined in the Drinking Water Program's earlier capacity development work plans was to investigate and, if feasible, make training material available to operators through the internet. This would save systems' time and resources by making appropriate training available to operators at all times of the day or night and in the remote areas of the state. However, limited staffing resources did not permit the Drinking Water Program to evaluate the possibility of internet training fully. Since that time, the Expense Reimbursement Grant (ERG) work plan has been approved that will allow the Drinking Water Program to use ERG funding to implement internet-based training for operators serving water systems of 3,300 or less. The Drinking Water Program's intention is to find a partner with technical and programmatic expertise and to support their efforts rather than to try to develop a separate system on its own.

Capacity development funds will be combined with the ERG funding to provide internet-based training to water system operators in Colorado at a reduced cost. The funding will be split between the two funding sources based on the percentage of public water systems in the state serving populations under 3,300 vs. water systems serving populations of more than 3,300 but less than 10,000. This split is approximately 10:1. Currently, the Drinking Water Program is working with certification and training organizations to define need-to-know information to guide development of Internet training modules. The development of the internet training program will proceed once the curricula are developed based on this need to know information. Internet courses will focus on those skills that can most effectively be taught via self-paced learning using remote training technology. Other skills will be reserved for classroom training through the conventional providers such as CRWA, AWWA Action Now, short schools, and community colleges. The Drinking Water Program has earmarked up to \$10,000 annually of capacity development set-aside funds for this internet training effort.

- Another activity that the Drinking Water Program is implementing is to provide certification exams on the internet. A contract with the Operator Certification Program Office will be extended to continue to provide these services, which complement other initiatives aimed at helping small system operators obtain certification. The approach has created a system that is truly useful and effective for

the operators. This initiative is in the early implementation stages, but the Drinking Water Program is allocating up to \$50,000 annually to keep this project moving.

Technical Assistance

Technical assistance is facility-specific advice, information, and/or problem solving designed to enable a particular system to achieve compliance, remedy a problem, or improve operations. The assistance provided to the public water system may address site-specific management, financial, technical, or programmatic concerns. Programmatic assistance, for example, may include providing water systems with organized sample result information that can be directly incorporated into their of consumer confidence reports. Technical assistance for example, might address filter surveillance techniques, proper backwashing procedures, or ensuring sufficient disinfection is achieved under all flow conditions. Technical, managerial, financial and programmatic assistance will require considerably more staff efforts than in the past, since the Systems of Concern project will require unique solutions to system problems, but this approach will result in lower rates of violations and will reduce the incidence of sanitary defects and other conditions resulting in public health concerns at drinking water systems.

The Drinking Water Program currently anticipates several new technical assistance initiatives, as well as continuation of one other initiative as described below:

- A continued technical assistance activity provides one-on-one TMF assistance for water systems that need to improve their individual capacity, by providing direct and individualized assistance. Building capacity unfolds in a two-step process: first identifying capacity needs and then developing individualized assistance projects. The first step of determining system capacity weaknesses provides an assessment of the system's technical, managerial and financial capacity. The Systems of Concern project provides significant information for this assessment process. A separate contractor (to avoid conflict of interest) then works with Drinking Water Program staff and system representatives to develop a customized assistance program to address the previously identified capacity weaknesses. Guidance materials developed in prior years will be made available to the contractor and the drinking water systems to assist in this effort. The Drinking Water Program will allocate \$200,000 of capacity development set-aside funds for these efforts each year.
- We have developed an internet based TMF Self-Assessment, which has received excellent reviews during the beta testing phase. During 2008, we will launch this program to all drinking water systems throughout Colorado, and provide support to those systems that request additional assistance. The self-assessment leads drinking water systems to a comprehensive toolbox of templates, literature, and other resources to help these systems resolve their shortcomings. This project was completed with funds designated for TMF Assessments and Training.
- Performance based training tied to plant-specific process control procedures development and deployment by participants (similar to the U.S. EPA AWOP

program, but less resource intensive). This program will be an education and technical assistance effort, delivered by experienced professional trainers, assisted by a cadre of trained water supply professionals gathered from the ranks of existing system operators and managers, technical assistance providers, and educators, who will be available for on-site proctoring of training sessions delivered in person or via the Internet, video conferencing, and/or webcasts, as appropriate. For electronically delivered events, the on-site assistants will respond to local questions and problems, and will assist students in the hands-on portions of the program. It is expected this effort will require a series of about 12 sessions spanning approximately one year. Drinking water systems participants will be expected to commit to the full program, which should cover nearly all treatment processes employed at conventional surface water treatment systems. The Drinking Water Program expects this effort to require approximately \$300,000 in 2007, \$400,000 in 2008 and \$300,000 annually to implement.

- Another planned technical assistance activity results from the early years of the above described TMF Assessment and Assistance Projects. We have discovered that many of the very small systems have very similar technical, managerial, and financial capacity limitations. Working intensely with these very small systems is resources intensive, so we have developed a group training effort that will get appropriate representatives from these small systems together in several locations throughout the state. We will have our assistance contractor deliver a program tailored to the needs of the systems in that area, avoiding the high cost of one on one assessments and assistance. The Drinking Water Program will allocate \$100,000 of capacity development set-aside funds for this effort each year.
- The Colorado Radionuclide Abatement and Disposal Strategy (CO-RADS) is a compliance assistance project developed by the Water Quality Control Division. Colorado has approximately 40 public water systems that are currently, or are anticipated to be, in violation of radionuclide standards set by the U.S. Environmental Protection Agency (EPA). The intent of the project is to address long-standing issues regarding removal and disposal of radionuclides from drinking water and to help affected public water systems return to compliance. The schedule for this project continues through December 2009.

CO-RADS will be a five-phased project, similar to the approach taken in the Colorado Strategy for Arsenic Reduction (CO-STAR), which was very successful in assuring compliance with the new arsenic standard. A brief description of the five phases follows:

- Phase 1 – Review existing data and identify affected systems
- Phase 2 – Sample affected sources to characterize water quality
- Phase 3 – Perform engineering analyses and pilot-studies of treatment and disposal options
- Phase 4 – Offer financial and compliance assistance to affected systems

Phase 5 – Provide recommendations and implementation assistance for affected systems

The consequences of existing and proposed radionuclide regulations, particularly related to the issues of disposal of concentrated waste streams from water treatment processes have presented perplexing problems for both small and large systems, their consultants, and the regulators approving design plans. While these systems and their related problems are each unique, there are many common issues these systems face. CO-RADS will provide assessment and assistance to drinking water systems that have radionuclide contaminants. The study will develop a toolbox consisting of preliminary treatment design for each system, identify and characterize the waste streams from the systems, and identify potential disposal options. These options will be discussed with the CDPHE Hazardous Materials and Waste Disposal Division, the group responsible for radioactive waste disposal regulations in Colorado, to develop generic guidelines that systems could follow in developing their unique solution to their radionuclide removal issues. The Drinking Water Program has a contract in place that will use about \$1,000,000 of capacity development set-aside funds to implement this effort. Additional funds will be required to provide financial assistance, which may come from the Drinking Water Revolving Fund, or from the planning and design grants noted below. This is substantially more funds than were originally identified for this project, but the scope of the effort is also substantially more than was first identified. By combining the funds identified for this and similar studies over three years, and adding in the contingency funds designated in each previous work plan year, the total resources required for this effort are covered.

- Security of drinking water systems is a new concern of the systems, the state, and the U.S. EPA. Security efforts are supported through a separate grant that looks at counter terrorism efforts of communities, but emergency response planning has been a concern of drinking water programs for many years. In order to assist drinking water systems of Colorado adequately prepare for any emergency situation, the Capacity Development Program will support the formation and initial implementation of an emergency response mutual aid program, to be called COWARN. This effort will use the knowledge and expertise of our Security Coordinator, and learn from the experiences of other states with similar programs to develop a state-wide mutual aid program. The Drinking Water Program anticipates this effort will require approximately \$50,000 per year to implement.

Financial Assistance

- Improved Access to SRF Loan Program - Because privately owned public water systems in Colorado are unable to receive SRF funding because of Colorado statutory limitations not contained in the federal SDWA, the Drinking Water Program is investigating the feasibility of providing financial assistance for public water systems to create Public Improvement Districts (PID). This approach would enable private water systems to change their ownership structure be eligible to participate in the SRF loan process. Historically, these water systems have had a significant number of violations and have

insufficient TMF capacity. The Drinking Water Program is interested in providing financial assistance to these systems to help them through the process of forming a PID that would then enable them to apply for a SRF loan. Pending EPA approval of this approach, the Drinking Water Program plans to develop a pilot program to evaluate this approach and develop a template for systems to use. The Drinking Water Program will allocate \$30,000 annually to encourage private water systems to restructure to become a Public Improvement District.

- Adequate understanding of financial management of a water system is frequently missing in many small communities, water districts and other small community drinking water systems, as well as in non-community systems. In addition, inadequate financial management frequently leads to inadequate technical and managerial capacity in these systems. In SFY 2007, the Capacity Development Program initiated development of a training program for boards, councils and managers of systems that will provide assistance in understanding the proper rolls and responsibilities of these individuals, provide tools for better use of the existing resources, and tools to increase the resources available to the drinking water system. The budget for this training program is \$100,000 annually.

Related Activities

There are many related activities developed through the Small Systems Training and Technical Assistance Set-Aside, and the Expense Reimbursement Grant that augment the Capacity Development efforts described in this work plan. A brief review of some of these efforts is presented below, in order to show how these related efforts work together to accomplish the broad goal of improving the quality of drinking water provided to the consumers of Colorado.

- Planning and Design Grants- Some of the water systems identified on the Systems of Concern list may require considerable modifications to their treatment facilities. Those with inadequate financial capacity may require financial assistance just to investigate the problem. With this in mind, the Small Systems Technical Assistance (SSTTA) set-aside workplan was revised. The new SSTTA work plan will allow small systems access to funding for planning and design grants. These grants will be provided to priority water systems with populations of 10,000 or less. The Drinking Water Program is planning to use SSTTA funding of up to \$200,000 annually for the next three years to implement the planning and design grants effort that will address the backlog of systems with violations that need infrastructure improvements. The Drinking Water Program is developing a set of technical criteria that must be followed by recipients of these grants to ensure that water systems and the Drinking Water Program benefit from the engineering work. This work will not require capacity development set-aside funds for implementation, but is described here to provide a more complete view of the capacity development activities.
- Small System Technical Assistance Funded Training- Annually, the State has developed a work plan to use the Small System Training and Technical Assistance (SSTTA) set-aside which is authorized by the 1996 amendments to the Safe Drinking Water Act to use up to 2% of the drinking water revolving fund capitalization grant.

Training activities are conducted under contracts or memoranda of understanding with Colorado Rural Water Association, the Rocky Mountain Section of AWWA, the Boulder School and Leadville School. The Drinking Water Program anticipates that much of the required operator training for systems less than 10,000 population will continue to be supported under the SSTTA set-aside. A workgroup consisting of technical assistance providers, small systems representatives, and the state operator certification program staff will continue to provide recommendations to the Drinking Water Program on planning and implementing the program. The Drinking Water Program has signed agreements for calendar year 2006 training events and is working with training providers to update a work plan to be implemented for calendar years 2007 and 2008.

SSTTA workgroup members and additional interested parties have discussed and agreed to use a portion of the SSTTA set-aside for planning and/or design grants and, if needed, other technical assistance. These efforts will give preference to disadvantaged communities. A further discussion on the design grant effort is included under the financial assistance heading.

- In 2002, the Drinking Water Program received approval of the Operator Certification Reimbursement Grant. As a result, the SSTTA workgroup and the operator certification training workgroup were combined into one work group. The two funding sources support utilities serving populations under 10,000 with the Operator Certification Reimbursement Grant designated for utilities serving populations under 3,300. The Drinking Water Program has developed a work plan detailing the vision of the workgroup and the Drinking Water Program to fund renewable training activities and encourage additional certification of operators by increasing the availability of training and testing locations throughout the state.

Finally, we recognize that many emerging issues occur every year, due to unanticipated changes in economic status, technical developments, and system capability shortfalls. These issues demand resources, including staff time, financial assistance, and contractor support, none of which are available without some contingency planning. We have reserved \$150,000 annually of capacity development funds to meet these unanticipated demands. Prior to any project implementation and commitment of these funds, the Drinking Water Program will consult with and obtain the approval of EPA to resolve these difficulties through the use of this contingency fund. This contingency is less than 8% of the total annual budget for the Capacity Development Program.

MEASUREMENT OF EFFECTIVENESS

Measuring the effectiveness of the capacity development program continues to be a challenge. The activities undertaken as part of Section 1420 of the SDWA are a small portion of the activities being pursued by the Colorado Public Water System Supervision (PWSS) program. The Water Quality Control Division is actively integrating capacity development activities into the overall Drinking Water Program activities. The following is a summary of follow-up activities and effectiveness measures that reflect this emphasis.

- Review of the Comprehensive Performance Evaluation A and B level performance-limiting factors as part of the sanitary survey.
- Development and implementation of the Systems of Concern project, where staff from all parts of the Drinking Water Program work together to help resolve problems with systems that have trouble continuously achieving compliance, regardless of whether they are under enforcement orders, an administrative order, on the Significant Non-Compliance list, or just having difficulty achieving TMF Capacity. This project has included the development of new and innovative tracking methods for public water systems in need of capacity development assistance.
- For training development we are taking a data-driven approach by evaluating responses by the division's Acute Team and summary data from sanitary surveys, system evaluations and other sources to determine the areas of greatest training need.
- A new contractor will be selected for a complete evaluation of the program's long-standing comprehensive performance evaluation project.
- Data required for NIMS reporting continues to be a compilation of the results and effectiveness of program-wide efforts, including capacity development.

Further, as each contract or memoranda of understanding is developed to implement this Capacity Development Program, we will identify specific objectives and performance measures against which we will determine the effectiveness of the specific project. These measures will be quantitative as well as qualitative, the mix depending on the nature of the project and the contractor.

**Table 1
Capacity Development Budget**

Assumptions						
Inflation			3.5%			
Onsite Indirect			19.2%			
Offsite Indirect			13.6%			
Flowthrough Indirect			1.0%			
			2007 Budget	2008 Budget	2009 Budget	2010 Budget
Prior Year Remaining Funds			\$4,328,470	\$3,481,033	\$2,054,448	\$351,465
Annual Allocation of Funds			\$1,449,700	\$1,449,700	\$1,449,700	\$1,449,700
Total Available Funds			\$5,778,170	\$4,930,733	\$3,504,148	\$1,801,165
Total Annual Expenditures*			\$2,305,489	\$3,238,377	\$3,152,683	\$2,735,420
Remaining Available Funds* as of June			\$3,481,033	\$1,692,356	\$351,465	(\$934,254)
			2007	2008	2009	2010
FTE						
Onsite						
Total FTE & Indirect, Onsite			\$535,266	\$695,841	\$720,195	\$657,706
Offsite						
Total FTE & Indirect, Offsite			\$59,383	\$61,461	\$63,612	\$65,839
TOTAL FTE & Indirect			\$594,649	\$757,302	\$783,808	\$723,545
Operating & Travel						
Coach Travel (two people)				\$60,000	\$60,000	\$60,000
Staff Travel - Annual Cap Dev Conference & Training			\$2,500	\$2,500	\$2,500	\$2,500
SWAP Operating and Travel Expenses (beginning 2008 incorp. Into total SWAP allocation below)						
Total Operating & Travel Expenses			\$7,200	\$62,500	\$62,500	\$62,500
Onsite Indirect Expenses			\$1,310	\$11,375	\$11,375	\$11,375
Total Op & Travel & Indirect			\$8,510	\$73,875	\$73,875	\$73,875

Contracts					
Reg guidance tailored by system type			\$150,000		
New System Regulatory Training and Technical Assistance			\$20,000	\$20,000	\$20,000
7 Categories Management Essentials, Etc.				\$150,000	
Database software maintenance and support (CADM)		\$10,000	\$15,000	\$15,000	\$15,000
Webpage improvements		\$10,000	\$50,000	\$50,000	\$50,000
Capacity Needs Survey			\$10,000		
Sanitary surveys w/ CPD		\$175,000	\$175,000	\$175,000	\$175,000
CPEs		\$100,000	\$100,000	\$100,000	\$100,000
TMF Assessments		\$100,000	\$100,000	\$100,000	\$100,000
SWAP existing MOU agreements (Karst, Analytic)		\$13,500			
State funded reg training		\$100,000	\$100,000	\$100,000	\$100,000
Internet training systems > 3,300		\$10,000	\$10,000	\$10,000	\$10,000
Certification exams on Internet		\$70,000	\$50,000	\$50,000	
Education & Tech Assistance (Excellence)		\$300,000	\$400,000	\$300,000	\$300,000
Group TMF Training		\$100,000	\$100,000	\$100,000	\$100,000
Board and Manager Training Program		\$100,000	\$100,000	\$100,000	\$100,000
PWS TMF Assistance		\$200,000	\$200,000	\$200,000	\$100,000
Radionuclide Disposal Study		\$200,000	\$400,000	\$400,000	
Special Regulatory Studies (similar to COSTAR)					\$200,000
Encourage Formation of Public Improv. Dists.			\$30,000	\$30,000	\$30,000
CoWARN Support		\$47,700	\$50,000	\$50,000	\$50,000
SWAP Total			\$300,000	\$300,000	\$300,000
Contingency Contract for Emerging Issues					\$150,000
Total Contract Expenses		\$1,668,950	\$2,360,000	\$2,250,000	\$1,900,000
Indirect Expenses for Contract work		\$33,379	\$47,200	\$45,000	\$38,000
Total Contract & Indirect Expenses		\$1,702,329	\$2,407,200	\$2,295,000	\$1,938,000
Total Expenditures		\$2,305,489	\$3,238,377	\$3,152,683	\$2,735,420