

**Idaho Department of Environmental Quality**



**Idaho 2008 Triennial  
Capacity Development Report  
to the  
Governor**

**Federal Fiscal Years 2006-2008**

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**State of Idaho**

**2008 Triennial Capacity Development Report  
to the Governor**

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## 2008 Triennial Capacity Development Report to the Governor

### Introduction

As the state's primary agency for implementing and enforcing the Safe Drinking Water Act, the Idaho Department of Environmental Quality (DEQ) is required to develop a Capacity Development Program that addresses the technical, financial, and managerial (TFM) needs of Idaho's public water systems.

The primary goal of the Capacity Development Program is to protect public health by ensuring that Idaho's public drinking water supply is safe to use.

Every three years, EPA requires that the state submit a State Capacity Development Report to the Governor, as required by the Safe Drinking Water Act (SDWA), outlining the progress and accomplishments of the state's Capacity Development Program.

DEQ submitted the first and second triennial reports to the Governor in 2002 and 2005. This 2008 report represents the third triennial report regarding the status of Idaho's Capacity Development Program.

### Capacity Development Program Defined

Idaho's Capacity Development Program helps public drinking water systems strengthen their ability to consistently supply safe drinking water to their customers. The program achieves this goal by assisting public drinking water system owners and operators (with an emphasis on small systems) to improve their *technical abilities*, *financial capabilities*, and *managerial skills* (TFM) in order to comply with SDWA requirements.

**Technical abilities** refer to the adequacy, operation, and maintenance of a drinking water system's infrastructure (e.g., water source, water treatment, storage, and distribution network). **Financial capabilities** refer to the monetary resources available to a public drinking water system to support the cost of operating, maintaining, and improving the water system. **Managerial skills** refer to the expertise required of owners and operators who oversee the drinking water system operations.

**The Capacity Development Program is federally funded** through funds set-aside from the Drinking Water State Revolving Fund (DWSRF), which was authorized under the Safe Drinking Water Act Amendments of 1996.

## Capacity Development Focuses On Small Drinking Water Systems

The Capacity Development Program maintains a focus on small public drinking water systems, which are more likely than other systems to have difficulty complying with Federal and State drinking water standards. Many of the small systems were created when regulatory standards were less protective and less challenging than the present regulatory system.

Small communities face the greatest difficulty in supplying water of adequate quality and quantity because they have small customer bases. Consequently, they often lack the revenues needed to hire experienced managers and operators, and to maintain and upgrade their drinking water supply facilities. Interruptions in water service due to inadequate management, as well as violations of drinking water standards, are often problems for the small drinking water system.

Nationwide, the majority of compliance problems occur within the smaller systems, i.e., those serving 3,300 or fewer customers. In Idaho this is especially true, where 90% (1,778) of the state's 1,983 public water systems serve 500 or fewer customers.

## The Goals of the Capacity Development Program

The Capacity Development Program goals, listed below, are organized into strategies for both new and existing public drinking water systems:

- **Goal: Prevent the formation of *new* nonviable community water systems\* and non-transient/non-community water systems.\*\***
- **Goal: Provide *existing* public water systems with technical assistance and information to help achieve viability and maintain compliance with the Federal and State drinking water regulations.**
- **Goal: Provide training and guidance materials to help drinking water system employees to become licensed operators.**

**\*Community water system:** A public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. Examples include municipally-owned public drinking water supplies (cities, towns), or privately-owned drinking water suppliers such as homeowner associations, apartment complexes, and mobile home parks.

**\*\*Non-transient non-community water system:** A drinking water system that regularly serves at least 25 of the same people over 6 months of the year. Examples include schools, day care centers, hospitals, offices, industrial parks, and major shopping centers.

## Implementing Capacity Development Goals

The implementation of each Capacity Development goal is detailed below with emphasis on the achievements of the last three federal fiscal years.

### ■ **Goal: Prevent the formation and operation of new non-viable water systems (community and non-transient non-community water systems).**

- **Requirements for new public drinking water systems.** Before new public drinking water systems can begin construction and operation, a comprehensive attempt is made to ensure ongoing technical, financial, and managerial (TFM) capabilities are achievable.

Section 500 of the Idaho Rules for Public Drinking Water Systems (IDAPA 58.01.08.500) states that construction of a new community or non-transient, non-community drinking water system cannot proceed until it has been demonstrated that the system will have adequate technical, financial, and managerial capacity as defined by the drinking water rules.

Demonstration of these capacities must be submitted to the Department prior to, or concurrent with, the submittal of system plans and specifications. Idaho adopted these Capacity Development regulations into the *Idaho Rules for Public Drinking Water Systems* in 2000 with updates in 2007. In addition, plan and specifications for existing systems proposing material modifications must also be submitted for review and approval. At times, even a change in ownership may also result in a system not having adequate TFM capacity to continue as a public water supplier.

DEQ staff reviewed 5,022 water system plan and specifications during the last three State Fiscal Years (2006, 2007, and 2008).

### ■ **Goal: Provide existing public drinking water systems with technical assistance and information to help achieve viability and maintain compliance with the Federal and State drinking water regulations.**

- **Improve the viability of existing systems by assisting small public drinking water systems with compliance.** DEQ offers direct assistance to many small drinking water systems.
  - **Direct Technical Assistance.** DEQ regional and State Office staffs provide a wide variety of direct technical assistance over the telephone, through correspondence, and in person (both one-on-one and in training workshops). This assistance to improve system capability includes information on how to submit updated facility plans for review, how to comply with microbiological and chemical sampling requirements, handling water quality complaints, and

issuing public notification regarding drinking water emergencies, such as contamination events and boil water advisories.

DEQ develops and publishes regulatory guidance for drinking water system owners and operators to help them interpret and implement rules and regulations. All of these guidance documents are available to the systems and the public on the DEQ's web site. Hard copies are also available from DEQ regional offices and district health departments.

- **DEQ Contracts with District Health Departments.** DEQ contracts with the state's seven district health departments to provide technical assistance to Idaho's small public drinking water systems. The district health departments provide the same one-on-one assistance that the DEQ provides to larger systems and performs a service that is essential to the success of the Idaho Drinking Water Program.
- **Consumer Confidence Report Assistance.** DEQ and district health departments assist community public water systems with meeting the requirements for Consumer Confidence Reports (CCRs). CCRs are annual water quality reports to the customers of community water systems. The report summarizes system information regarding water sources used, any detected contaminants, the status of system compliance, and includes general public educational information. The reports are due July 1 of each year.

In order to make CCR reporting easier, DEQ generated a CCR report template with instructions, and made the sampling/monitoring and violation information available for each community system to use in completing the report.

The entire CCR report can be prepared on-line and sent electronically (or by mail) to the local DEQ regional office. The template and instructions are available in hard copy for those systems that do not have access to a computer. (*See also "CCR Tool" under Database Management, page 6.*)

- **Drinking Water State Revolving Fund (DWSRF).** The Federal Safe Drinking Water Act (SDWA) of 1996 allowed states to establish a Drinking Water State Revolving Fund (DWSRF) program to assist public drinking water systems with financing infrastructure upgrades needed to protect public health and achieve and maintain compliance with the SDWA requirements. The DWSRF authorizes grants to states to capitalize revolving loan funds. A revolving loan is a self-replenishing pool of money, using annual Federal capitalization grants, investment earnings, and interest and principal payments on old loans to issue new ones.

DEQ uses DWSRF loan funds to provide assistance to eligible public drinking water systems for infrastructure improvements. Interested systems apply to DEQ for assistance, and loans are made to systems that have the managerial and technical capabilities (or will achieve these capabilities through the loan project), and can demonstrate need through a competitive ranking process. The State also offers state-funded grants for planning projects using general fund resources.

For the period of this report (covering years SFY 2006, 2007, 2008), the DWSRF has provided **\$80,185,305 in loans to 23 drinking water systems**, while the State has provided **\$739,395 in planning grants to 36 systems**. The loans and grants provide funding for system upgrades, source water protection, water quantity and water quality issues, and distribution system protection.

- **Sanitary Surveys.** DEQ makes periodic inspections, called sanitary surveys, of public drinking water systems to ensure that they are properly built, operated, and maintained. Sanitary surveys provide a positive approach for evaluating and assisting public water systems, since the physical condition of a public water system often reflects its technical, financial, and managerial (TFM) capacities.

In 2002, in order to improve the state's sanitary survey, DEQ initiated the Enhanced Sanitary Survey (ESS) Project. The goal of the project was three-fold:

1. Standardize (statewide) the method by which drinking water inspectors apply the state drinking water rules during a sanitary survey,
2. Produce a report consistent in format and language, and to
3. Use the sanitary survey form as a tool to assist public water drinking systems in complying with state and federal regulations.

The Drinking Water Program is currently using a version of the ESS, which has ten modules and contains approximately 200 questions with specific TFM sections and questions built into the form.

The modified ESS focuses on questions that address "Health Hazards" found during the inspections, which constitute "Significant Deficiencies" that the system must correct. This project has resulted in a consistent manner in which the state's standard sanitary surveys are conducted. The survey produces a preliminary findings report that not only reflects the language found in the rules, but outlines what the system must do to meet compliance, and ultimately, to protect public health.

For SFY 2006, 2007, and 2008, DEQ conducted 1,207 sanitary surveys. (Depending on the type of drinking water system, sanitary surveys are conducted every three or five years.)

□ **Data Management/SDWIS (Safe Drinking Water Information System)**

Data management and data entry procedures, through DEQ's SDWIS database, are critical to efficiently track water system compliance and to support department enforcement efforts. More importantly, the database is a critical tool for ensuring that drinking water quality standards are met and the water is safe to drink. DEQ's database is a vital tool for the staff of DEQ's six regional offices and the seven district health departments to oversee the state's small drinking water systems. The following SDWIS programs explain recent data management innovations.

- **SDWIS QA/QC Tool.** The development of the "Idaho SDWIS QA/QC Tool" has allowed the Drinking Water Program to identify more than 3,000 database issues to be corrected. As a result of SDWIS QA/QC Tool ("quality assurance/quality control"), the program's commitment to cleaning up the database has resulted in quality information, which gives a true reflection of a public drinking water system's compliance with the Idaho Rules for Public Drinking Water Systems, and the safety of the drinking water.
- **CCR (Consumer Confidence Report) Tool.** The "Idaho CCR Tool" allows DEQ to efficiently provide the sampling and violation history of a community water system to owners for their required annual Consumer Confidence Reports, which are distributed to system customers each July 1.

The CCR Tool allows an owner or operator to go to the Internet and gather the necessary information to produce their own CCR without the assistance of DEQ regional or district health department staff. This "come-and-get-it" approach has been found to be more efficient and effective for the community water system owners, as well as the DEQ regional offices and district health departments.

Customers of drinking water systems and interested members of the public can also access this information

- **ESS (Enhanced Sanitary Survey) Prep Tool.** The development of the "Idaho ESS Prep Tool" has allowed the staffs of DEQ regional offices and district health departments to save valuable time by running this pre-sanitary survey report. The Sanitary Survey Report gathers information from SDWIS that is needed for a sanitary survey. The ESS Prep Tool pulls data from SDWIS and places it in an easy-to-read format, saving approximately two hours of preparation work needed for each sanitary survey. This efficiency facilitates greater amounts of "face time" with the operators throughout the state.

- **IDWARN.** In 2005, the Idaho Drinking Water Program initiated IDWARN (Idaho Water/Wastewater Agency Response Network), a mutual aid organization

of communities helping communities by allowing water and wastewater utilities to assist each other during emergencies. IDWARN participants can access specialized resources, including staff, to assist water and wastewater systems until such time that the system can return to normal operating conditions.

The program is administered by an IDWARN Statewide Committee and is available to all public and private water and wastewater systems in Idaho. Participation is voluntary and is not mandated by local, state, or federal regulations. At the time of this report, IDWARN is just beginning to acquire member systems, but the potential for assisting neighboring utilities in time of need is promising.

#### □ **Capacity Development Public Outreach**

- **The Idaho Drinking Water Newsletter** is a quarterly newsletter mailed to both the owners and operators of all 1,983 of Idaho's public drinking water systems, as well as those entities requesting to be on the mailing list such as consulting engineers, counties, and federal agencies. Each city in Idaho receives one copy per city for the mayor and city council to review.

The goal of the newsletter is to provide public drinking water systems with accurate, timely, and essential information in a straightforward manner to promote compliance with the drinking water standards.

The four-page newsletter, with occasional inserts, provides “need-to-know” articles such as advance notice of upcoming regulations, monitoring reminders, current water quality problems (with suggested solutions), and a training schedule for drinking water operator classes. Safedrinkingwater.com, <http://www.safedrinkingwater.com/>, a good source of news and information for drinking water quality professionals, has on occasions singled out the Idaho Drinking Water Newsletter by noting a particular article.

The newsletter is also available on DEQ's web site, and systems can request to receive copies electronically through the department's “gov.delivery” system. “Gov.delivery” is a program available to citizens that want to be notified electronically as new drinking water material becomes available. DEQ tracking shows that the newsletter receives more hits than any other component on DEQ's web site.

During the last three years, the Drinking Water Program produced eleven issues of the newsletter (Issues 39-48) all of which are posted on DEQ's web site. Articles appearing in the newsletter are directly related to the Capacity Development Program as the headlines below indicate:

- [Contracting with a drinking water operator,](#)
- [Notifying the public of a boil water advisory,](#)

- Strengthening protection against microbial contaminants,
  - DEQ grant/loan program mails “letters of interest” forms,
  - Do not remove or clean faucet aerators prior to lead sampling,
  - Reminder: Idaho DW Rules require a Facility Plan,
  - Sanitary Surveys 101 for Idaho PWSs,
  - IBOL reminds operators of education requirements,
  - Intermittent chlorine disinfection – do’s and don’ts,
  - Some systems may require both treatment and distribution operators, and
  - IDWARN: Emergency mutual assistance for systems.
- **DEQ’s Drinking Water Web Site.** Over the last three years, the Idaho Drinking Water Program has continued to make more information available to public water systems on its web site. A DEQ tracking system indicates that the site is being visited by an increasing number of citizens. Public water systems now have an array of information available to them.

*A shortened general information list includes* Frequently Asked Questions (FAQs) About Drinking Water; FAQs about Drinking Water Operator Licensing for System Owners and Operators; Consumer Confidence Report Template and Instructions; Arsenic Standard; Applicant’s Guide to Drinking Water Planning Grant Program; Drinking Water Protection; Drinking Water and Wastewater Guidance for Engineers and Developers; Sanitary Surveys; Plan and Specification Review Checklist for Engineers and Developers; list of Laboratories Certified by Idaho; Monitoring Requirements and Waivers; Public Notification Requirements; various guidance for drinking water rules such as Stage 1 and 2 Disinfectants and Disinfection By-products; and an Operator Licensing Database and Operator Search Tool.

*Fact sheets include* After the Flood: Protecting Your Drinking Water; Boil Water Door Hangers; Nitrate Door Hangers; Coliform Bacteria; Disinfecting Domestic Water Wells and Storage Tanks; Mercury Seals and Submersible Pumps; and Water Conservation Tips for Residents.

- **Area Wide Optimization Program (AWOP).** Approved by EPA’s Region X in 2003, Idaho’s AWOP program is designed to assist public surface water treatment plants that use coagulation and filtration in producing high quality drinking water by optimizing plant operations.
- **AWOP Defined.** AWOP is an effort to improve performance of direct and conventional surface water filtration plants by fully utilizing technologies already in place. The program emphasizes the role of particle removal and disinfection in maximizing public health protection against microbial contaminants in drinking water from surface water sources.

AWOP provides tools for tracking plant performance at each step in the treatment process over the course of several years. This analysis of long-term

trends allows individual plants to target weak points in the procedures used for improvements. The comparison of performance data from all 17 conventional and direct filtration plants in the state allows DEQ to rank the plants so limited state resources can be spent where needed most.

- **2006 Certificates of Achievement.** In May 2006, Certificates of Achievement were presented to six water treatment plants based on their optimization performance from July 2004 through June 2005. To receive this award, a plant had to start with achieving a finished water turbidity of 0.1 NTU or lower at least 95% of the time. (Turbidity is measured in Nephelometric Turbidity Units or NTUs. Turbidity may never exceed 1 NTU, and must not exceed 0.3 NTU in 95% of daily samples in any month.)

In addition, the plants had to meet other stringent criteria related to public health protection. Included in this second set of criteria were source water vulnerability, plant operations, and plant upgrades. The six plants that received this award are listed below:

- City of Lewiston
- City of McCall
- City of Sandpoint (Lake Plant)
- City of Sandpoint (Sand Creek Plant)
- United Water – Marden Plant
- City of Priest River

- **2008 Training Workshop.** AWOP held a two-day training workshop entitled “Optimizing Distribution System Operations and Water Quality” April 16-17, 2008 in Coeur d’Alene, Idaho. The workshop, attended by 38 people, was aimed at the specific training needs of the northern Idaho public drinking water distribution systems.

■ **Goal: Provide training and guidance materials to help system employees become licensed operators.**

- **The importance of licensed operators.** Idaho recognizes the need to ensure proper operation of water facilities through properly trained and educated water system operators. Operator licensing helps protect human health and the environment by establishing minimum professional standards for the operation and maintenance of public water systems. In short, operator licensing ensures that skilled professionals are overseeing the treatment and distribution of the state’s public drinking water.

Operators are responsible for the day-to-day management of a drinking water system’s operation. Some of the duties and responsibilities include sampling and monitoring; calculating and making chemical applications; operating and

maintaining system equipment; issuing public notices to users when systems are not in compliance; and recordkeeping.

As of August 2008, there are 1,483 licensed drinking water operators in Idaho.

- **DEQ provides statewide operator training.** Using the State of Idaho's Request for Proposal process, DEQ contracts with an in-state water/wastewater operator training firm to provide 75 days of operator training each year in various locations throughout the state of Idaho. These training classes are frequently held in small somewhat remote towns in an attempt to accommodate operators who might not have the time or funds to travel long distances to attend classes (*see also "Operator Reimbursement" below*). Currently, Brown Environmental, Inc. of Nampa, Idaho is DEQ's operator training contractor.
- **DEQ and the WWP Board oversee drinking water operator licensing.** In Idaho, DEQ and the Idaho Board of Drinking Water and Wastewater Professionals (WWP Board) oversee the licensing of drinking water operators. DEQ determines which public water systems must have licensed drinking water operators, and requires that public water systems (with the exception of transient ground water systems) place the supervision and operation of their systems under a properly licensed operator.

The WWP Board establishes requirements for operator licenses, sets fees, reviews applications, issues licenses, license renewals, and determines continuing education requirements. (*Note: The WWP Board contracts with the Idaho Bureau of Occupational Licenses [IBOL] for day-to-day operations.*)

Idaho's operator licensing program has been fine-tuned over the last several years and basically operates as follows:

- **System classification worksheets are available** from DEQ on-line or from the agency's six regional offices, which owners/operators fill out and submit to DEQ to find out the type of licensed operators required for their systems.
- **Using the classification forms, DEQ determines the licensing level** that the system's "responsible charge operator" and the "substitute responsible change operator" (backup operator) must have.
- **To assist owners in finding a licensed operator**, DEQ maintains on-line a "List of Licensed Operators" interested in contracting their services.
- **DEQ's booklet, "Recommendations for Hiring a Contract Operator"** is available on-line for the owners of public drinking water systems.
- **For operators needing licenses**, the Idaho Bureau of Occupational Licenses (IBOL) provides, on-line, applications and the required qualifications an operator must have to obtain a license.
- **DEQ maintains an Operator Reimbursement Program**, using state-funded grants, which assists small drinking water systems (serving 3,300 or less) in obtaining and maintaining skilled licensed operators by reimbursing training and travel expenses associated with operator licensing.

- **DEQ contracts with an in-state operator training firm**, which provides 75 days of training each year throughout the state for individuals seeking licenses or for operators who are renewing their licenses.

## Summary

Idaho's Capacity Development Program focuses resources on the areas of highest public health benefits and promotes voluntary compliance with drinking water standards. The program emphasizes prevention of drinking water contamination through stopping the creation of new systems not equipped with the necessary TFM capabilities needed to succeed. The program also provides technical assistance to public water systems, and promotes training and licensing of water system operators.

The Capacity Development Program, along with other state resources, has continued to help public water systems acquire or maintain the TFM abilities needed to properly design, operate, finance, and manage their systems. DEQ's goal is to continue to improve the ability of Idaho's public water systems to provide safe and reliable drinking water.

The Idaho Department of Environmental Quality continues to support the Capacity Development Program and is convinced that maintaining overall public drinking water system capabilities are essential to operating a safe and reliable public drinking water supply. The Capacity Development Program will continue to evolve as the program evaluates its successes and failures, and as small drinking water systems face new challenges in complying with new and revised regulations.